Utilitarianism and Buddhist Ethics:
A Comparative Approach to the Ethics of Animal Research

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Abstract

This thesis explores the comparison utilitarianism and Buddhist ethics as they can be applied to animal research. It begins by examining some of the general discussions surrounding the use of animals in research. The historical views on the moral status of animals, the debate surrounding their use in animals, as well as the current 3R paradigm and its application in Canadian research are explored. The thesis then moves on to expound the moral system of utilitarianism as put forth by Jeremy Bentham and John Stuart Mill, as well as contemporary additions to the system. It also looks at the basics of Buddhist ethics well distinguishing the Mahayana from the Therevada. Three case studies in animal research are used to explore how both systems can be applied to animal research. It then offers a comparison as to how both ethical systems function within the field of animal research and explores the implications in their application on its practice.

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The practice of using animals for research purposes has been an important part of the scientific community for centuries and has led to great gains in human knowledge. At no time in the past has using animals for research purposes come under as much criticism or been so widely debated as it is in the present. The rise in the number of animal protection agencies has led to more widespread media coverage of animal issues, and has led members of the scientific and non-scientific communities to question whether or not it is ethical to use animals for research purposes, and if so to what extent. The purpose of this thesis is to explore the subject of ethics and animal research using two distinct and unique ethical systems: the first, utilitarianism, has been widely applied to the matter of animal research; the second, Buddhist ethics, is relatively new to the applied ethics field. By comparing these two ethical systems it is hoped that new insights may be gained regarding the practice of using animals in research, specifically in regard to the treatment of animals during all stages of research.

Utilitarianism has been widely applied to the issue of using animals in research. It is an ethical system that can cross species boundaries and be applied to animals. The ethical theory of utilitarianism relies on the experience of pleasure and pain in order to determine which actions can be considered ethically sound; if an action will produce more pleasure than pain, it can be considered a right action. It is now commonly assumed that animals experience varying degrees of pleasure and pain in a manner similar to humans, therefore the utilitarian calculus can be conducted so as to include animals in ethical considerations. The question as to whether animal experiences of pleasure and pain should be considered equally alongside human experiences of pleasure and pain will be examined during the course of this thesis, as well as what that would

mean to the practice of animal research. Because utilitarianism has been so widely applied to bioethical problems, it will contrast Buddhist ethics which have not been widely applied.

The ethics of Buddhism are part of a larger philosophical system which strives to liberate all beings from suffering. The main ethical position that Buddhism advocates is the cultivation of compassion towards all beings, and this will be the fundamental attribute that can be applied to the ethics of animal research. The reason Buddhist ethics were chosen as a subject of study in this thesis is because they bring a different perspective on how humans should regard beings that are not members of their own species. Like utilitarianism, Buddhist ethics can be applied across species boundaries, which make them useful in the study of the ethics of animal research. Although both systems can be applied across species boundaries, they both function in a very different manner; for example, Buddhist ethics are not solely concerned with the criteria of pleasure and pain, rather Buddhism is concerned with a distinct type of reverence for all life forms, which makes it unique.

There are two main branches of Buddhism; one tradition is Theravada Buddhism, and the other Mahayana Buddhism. For the purposes of this paper, some of the differences between the traditions are explored, and Mahayana ethics are adopted as representing Buddhist ethics in general. This is because, although there are fundamental differences in the two systems regarding the attainment of *nirvana*, their treatment of animals and how they could be applied to animal research are very similar. The differences between the systems, including the idea of the *bodhisattva* are explored, but

overall it seems that both systems agree on the main points that are used in this thesis in the application of Buddhist ethics to animal research.

Three well-known case studies will be used in order to illustrate how utilitarianism and Buddhist ethics can be directly applied to animal research. The baboon head injury study conducted in Pennsylvania, the study of primate language acquisition using the chimpanzee Washoe, as well as Jane Goodall's studies in Gombe will all be used. These three case studies were chosen because they are quite famous, easily accessible and they represent three various types of research. The cases allow ethical judgements using utilitarianism and Buddhist ethics without requiring an extensive knowledge of medical science in order to understand the research involved in each case. Although the baboon head injury study is extreme, it serves as an example of research that eventually results in the death of the research subject, which is not uncommon in animal research. Not all animal research involves injury to the animal or invasive medical procedures, behavioural studies using animals are common among the social science disciplines. The case studies of Washoe's language acquisition, as well as Jane Goodall's work in Gombe are two examples of this type of research. The Washoe case is an example of research that requires the animal to be in a research setting but does not physically harm the animal for research purposes. Goodall's study in Gombe is an example of the most passive type of animal research which has little interference on the animals' natural life. Although there are many types of research conducted on animals, the three selected cases will be sufficient for the purpose of exploring the key ethical implications of applying utilitarianism and Buddhist ethics to animal research. It will be

shown that both ethical systems function in a unique manner, yet both can be used to prescribe guidelines regarding the treatment of animals used in research.

The first chapter of this thesis will begin by briefly outlining the historical debate about the moral status of animals. Determining the moral status of animals greatly affects how they can be used during research, and if they can be used at all. In the past, many philosophers did not grant moral status to animals, and this impacted how they were treated by humans. It is important to explore these ideas in order to see how the current standards of practice have become acceptable today. Following the discussion of the historical debate surrounding the moral status of animals, the debate surrounding the use of animals in research will be explored. This section will outline three periods of debate regarding animal research, as set out by Rowan and Loew. This will be followed by a section outlining the benefits of animal research in order to demonstrate the unique knowledge that has been gained in various fields.

Following the historical discussion of the issues surrounding the use of animals in research, the current paradigm that dictates the standards of practice for animal research in the present will be explored. The present theory guiding the practice of animal research in North America and Europe is known as the three Rs, or replacement, refinement, and reduction. In Canada, the three Rs have been used in shaping the Canadian Council on Animal Care's *Guide to the Care and Use of Experimental Animals*, which sets out the standards and guidelines to be adhered to for all animal research undertaken in Canada. The policies set out in the *Guide to the Care and Use of Experimental Animals* will be discussed in regard to how animals can be used in the experimentation process, the standards for housing and treatment of animals, as well as

the limits as to what can be done to them. This is an important part of chapter one, as it will explicate the current standards in animal research which will come under scrutiny as the implications of applying utilitarianism and Buddhist ethics are explored.

The second chapter of this thesis will study the moral theory of utilitarianism. The first portion of the chapter will examine utilitarianism as laid out by Jeremy Bentham and John Stuart Mill. These two authors can be considered the fathers of utilitarianism as it is found in its contemporary form, and they are relied on heavily throughout the second chapter in the exploration of utilitarianism. Additions to the theory of utilitarianism will be explored following the discussion of Bentham and Mill's founding principles. Once the theory of utilitarianism is sufficiently outlined it can be assessed as to how it applies to animal research. It will be argued that utilitarianism can be applied to animal research because of the reliance on the notion of suffering and the capacity for animals to feel pleasure and pain. The final section of the second chapter will apply the theory of utilitarianism to the three case studies in animal research that will be used throughout the remainder of the thesis.

The third chapter of this thesis will be devoted to the exploration of Buddhist ethics. It will begin by outlining the basic principles of Buddhist ethics in order to further our understanding on how ethics function within the "goal" oriented Buddhist framework of striving towards *nirvana*. Buddhism is a whole philosophical system, rather than just a moral philosophy, and the soteriological aspect, as well as other metaphysical views must be briefly examined in order to fully comprehend the significance of ethical action. Once it has been explained how the ethics of Buddhism fit within the overall Buddhist framework, the discussion will move on to examine this differences between Mahayana

and Theravada. Mahayana ethics will then be looked at in regard to where animals fit into the Buddhist framework, and what consideration they must be given as living beings. The final section of the third chapter will examine the three case studies in order to apply Buddhist principles to animal research.

The final chapter of this thesis will be devoted to a discussion and comparison of the ethical systems of utilitarianism and Buddhism. The first part of the chapter will be used to explain the significance of applying utilitarianism and Buddhism to the ethics of animal research. The following section will compare the results of the application of the two systems to the three case studies presented in the previous chapters. This will be done in order to explore the differences and similarities of utilitarian and Buddhist ethics as applied to animal research. This section will focus on why and how the two systems arrived at an acceptance or rejection of each case as ethically sound or otherwise. The third part of the final chapter will explore some of the problems with the application of utilitarianism and Buddhist ethics to animal research. To conclude the final chapter, the moral status of animals in utilitarian and Buddhist ethics will be explored.

This thesis will conclude by looking at the practical implications of applying utilitarianism and Buddhist ethics to animal research, and what this may mean for the future of animal research. It will be shown that Buddhist ethics could have an important part in shaping our ideas about how animals can be used in research, and how they should be treated during research. The current paradigms guiding research will be re-examined in light of the results of this thesis in hopes of showing that utilitarian and Buddhist ethics are viable means for setting up ethical guidelines for the practice of using animals in research.

Chapter 1: Animal Research

In this chapter I will examine the historical and contemporary use of animals in medical research, and the current issues or debates surrounding their use. The first section of this chapter will be an introduction to the debate about the moral status of animals, which is important to animal research because, depending on the dominant viewpoint in regard to the moral status of animals, it will affect the practice of animal research. This section will include some of the prominent viewpoints surrounding animal use and their moral status. The next section of the chapter will be used to look at some of the issues that have impacted the use of animals in medical research. The third part of this chapter will examine the benefits of animal research. It will be useful to understand what knowledge we have gained from animal research and to demonstrate why it has been an accepted and useful practice. The fourth section of the chapter will examine the current paradigm that dictates the standards of practice for animal research, the three Rs: replacement, refinement, and reduction. Following the explication of the three Rs, focus will be turned to the Canadian Council on Animal Care's *Guide to the Care and Use of Experimental Animals;* this part of the chapter will examine some of the policies that are in place regarding how animals are to be used in the experimentation process, their treatment, what type of experiments they can be used for, as well as the limits of what can be done to them.[1] The final section of this chapter will be a brief summary of the ideas presented and their impact on the discussions in the next two chapters.

[1] Canadian Council on Animal Care: *Guide to the Care and Use of Experimental Animals,* ed. Ernest D. Olfert, DVM, Brenda M. Cross, DVM, and A. Ann McWilliam. Vol. 1, 2nd edition. 1993. [CCAC *Guide*].

1.1 The Moral Status of Animals

There have been varying views on human relations to animals throughout history, and these changing views impact how animal research has been and is being conducted. Animal research practices reflect the current stance in the ongoing debate about the moral status of animals. It is helpful to review some of the major western and philosophical notions that have been adopted regarding the moral status of animals because these views have been the main influence on how scientists and researchers have historically used animals for research.

Although it has been argued that the exclusion of animals from moral consideration in pre-18th century Europe was the exception rather than the rule, it appears that the dominating philosophical positions of western societies have not viewed animals as possessing moral status. Outside of the western philosophical tradition, animals were usually viewed as having a sort of moral status, or of being worthy of human respect. Hunter-gatherer and early agrarian societies usually viewed animals as fully rational, sentient beings, and that humans were to maintain correct and respectful relationships with them.[2] Cultures that used domestic animals for food often viewed killing animals in a non-sacrificial way as equivalent to manslaughter.

The philosophical debate about the moral status of animals began in Ancient Greece with Aristotle's influence on western culture.[3] Aristotle believed that "non-human creatures are essentially different from humans" because of the world's natural hierarchy. This hierarchy placed plants at the bottom because they only possessed life,

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[2] *The State of the Animals 2001.* ed. Deborah J. Salem & Andrew N. Rowan. Published by the Humane Society of the United States, 2001. p 39.

[3] *Magpies, Monkeys, and Morals: What Philosophers Say about Animal Liberation.* by: Angus Taylor; Broadview Press, 1999. p 25.

but some animals possessed both life and sense perception, so they stood between plants and humans who possessed life, sense perception and reason. Aristotle also believed that what was superior by nature has governance over what is inferior, so animals, as well as men born into slavery, were seen as a resource for other men to use.[4] In his 'Politics', Aristotle states:

> He then is by nature formed a slave who is qualified to become the chattel of another person, and on that account is so, and who has just reason enough to know that there is such a faculty, without being induced with the use of it; for other animals have no perception of reason, but are entirely guided by appetite, and indeed they vary very little in their use from each other; for the advantage which we receive, both from slaves and tame animals, arises from their bodily strength administering to our necessities.[5]

Aristotle believes that due to the natural hierarchy certain men are born for the use of other men, and all animals can be used to serve human purposes. He concludes that:

> It is evident then that we may conclude of those things that are, that plants are created for the sake of animals, and animals for the sake of men; the tame for our use and provision; the wild, at least the greater part, for our provision also, for some other advantageous purpose, as furnishing us with clothes, and the like. As nature therefore makes nothing either imperfect or in vain, it necessarily follows that she has made all these things for men.[6]

The Aristotelian stance on the moral status of animals is similar to the traditional Christian position. This position is commonly known as the Divinely Granted Dominion position which justifies the use of animals through biblical authority.[7] In Genesis 26, once God created man in his own image, He says to man, "Be fruitful and multiply, and fill the earth and subdue it; and have dominion over the fish of the sea and over the birds

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[4] *Magpies, Monkeys, and Morals: What Philosophers Say about Animal Liberation,* p 25.
[5] Aristotle's 'Politics' from: *Animal Rights: A Historical Anthology* ed: Andrew Linzey and Paul Barry Clarke. Columbia University Press; New York, 2004 p 57.
[6] Aristotle's 'Politics' from: *Animal Rights: A Historical Anthology,* p 58.
[7] *Contemporary Issues in Bioethics.* Sixth edition. ed. Tom L. Beauchamp & LeRoy Walters. Wadsworth-Thomson Learning Inc. Belmont, CA. 2003. "Formulation of Ethical Standards for Use of Animals in Medical Research" by: Andrew N. Rowan. p 437.

of the air and over every living thing that moves upon the earth."[8] This viewpoint, strongly promoted by the works of St. Augustine and St. Thomas Aquinas, states that animals were not given the faculty of reason by God and they were placed on earth for human use[9]. St. Thomas Aquinas agrees with the divinely granted dominion position and, it appears, with Aristotle's natural hierarchy position when he states:

> ...so also is there order in the use of natural things; thus the imperfect are for the use of the perfect; as plants make use of the earth for their nourishment, and animals make use of plants, and man makes use of both plants and animals. Therefore it is in keeping with the order of nature, that man should be master over animals.[10]

St. Thomas Aquinas holds that is perfectly fine to kill animals for human purposes, and St. Augustine explains how God's commandment 'Thou shalt not kill' only refers to humans and allows for the killing of animals:

> Thou shalt not kill, we do not understand this of the plants, since they have no sensation, and the irrational animals that fly, swim, walk, or creep, since they are dissociated from us by their want of reason, and therefore by the just appointment of the Creator subjected to us to kill or keep alive for our own uses; if so, then it remains that we understand that commandment simply of man.[11]

In this quote St. Augustine refers to the faculty of reason as the trait that differentiates humans from other animals. Reason is used by other philosophers as the central criteria for separating man from animals.

Locke and Hume both believed that animals possess a degree of reason, but this did not mean that they would grant animals moral status. Locke believed that since animals possess sensation, they can then have perception and form ideas. Although they

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[8] *The Holy Bible: Revised Standard version containing the Old and New Testament.* Ed: Herbert G. May & Bruce M. Metzger. Oxford University Press; New York, 1973 p 2.
[9] *Magpies, Monkeys, and Morals: What Philosophers Say about Animal Liberation,* p 23.
[10] St. Thomas Aquinas' 'Summa Theologica' from: *Animal Rights: A Historical Anthology,* p 61.
[11] St. Augustine's 'The City of God, Politics' from: *Animal Rights: A Historical Anthology,* p 60.

could form basic ideas, according to Locke, animals could not form general ideas or engage in abstract reason.[12] Since they lack the rational abilities of human beings, animals are on earth for humans to use, which is similar to the Divine Command Theory. Locke's believes that humans should not use other humans for ends, but they may use animals because,

> being furnished with like faculties, sharing all in one community of nature, there cannot be supposed any such subordination among us, that may authorize us to destroy one another, as if we were made for another's uses, as the inferior ranks of creatures are for ours.[13]

Hume believed that animals could make inferences about their environment based on their experiences, which means they possess a degree of reason. According to Hume, only humans are entitled to just treatment because they are social creatures and it is necessary to their condition; but because animals cannot resist the will of human beings', human beings have command over them:[14]

> [T]he necessary consequence, I think, is that we should be bound by the laws of humanity to give gentle use to these creatures, but should not, properly speaking, lie under any restraint of justice with regard to them, nor could they possess any right to property, exclusive of such arbitrary lords. Our intercourse with them could not be called society, which supposes a degree of equality; but absolute command on one side, and servile obedience on the other.[15]

Hume believes that humans should not abuse animals because it would be inhumane, but humans have no duties towards animals because they are not socially equal to humans. Social considerations have also been used against granting animals moral status by contractarianism and Hobbes.

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[12] *Magpies, Monkeys, and Morals: What Philosophers Say about Animal Liberation*,p 32.
[13] John Locke's 'The Second Treatise of Government' from *Animal Rights: A Historical Anthology,* p 71.
[14] *Magpies, Monkeys, and Morals: What Philosophers Say about Animal Liberation,* p 33.
[15] David Hume's 'Enquiry Concerning the Principles of Morals' from *Animal Rights: A Historical Anthology,* p 122.

Philosophers holding to the contractarian view believe that moral status is based on being able to enter into a contract with others in order to get what one wants. This means that moral rights are a product of social agreement among rational beings; animals lack reason so they cannot enter into a contract, therefore they are denied any moral rights. The only reason one should not treat an animal cruelly is because it might offend another human; for example, "I shouldn't kick your dog because that would upset you, and you are another human being, one with whom I have an understanding about how to behave."[16] Hobbes would have also held this belief because for him all humans are a threat to all other humans, unless they abide by a social contract that is set up to circumscribe the war of all against all. Hobbes states: "Forasmuch therefore as it proceeds from the right of nature, that a beast may kill a man, it is also by that same right that a man may kill a beast."[17] Beasts, lacking reason, are not bound by any principle of justice to stop them from killing each other or humans, therefore there is no reason for humans not to kill animals.

The animal rights position, which is a contemporary position, can also be affected by views regarding the social contracts of humans. The contemporary animal rights view is often confused and ambiguous because of the many different schools and beliefs involved with it, so this discussion will stick to some basic points surrounding the animals rights viewpoint. A "right" can be considered as a claim to something, such as the right to life, which is recognized on the basis of moral or legal principles.[18] These basic individual rights cannot be denied, even for the good of the community. Moral rights can be based on a social agreement, as is the case in contractarianism, or can be

[16] *Magpies, Monkeys, and Morals: What Philosophers Say about Animal Liberation,* p 20.
[17] Thomas Hobbes' 'De Cive' from *Animal Rights: A Historical Anthology,* p 67.
[18] *Magpies, Monkeys, and Morals: What Philosophers Say about Animal Liberation,* p 18.

applied to "...certain sorts of beings on the basis of their natural characteristics, independently of a revocable social agreement, and independently of their utility to others."[19] In order to be granted moral rights, not based on a social contract, beings must have a significant quality that entitles them to respect and justice.[20] Those who want to grant animals moral rights would hold that they do possess such a quality that entitles them to be treated justly; they may believe that an animal's ability to suffer grants them the right to life and a state of well-being. There have been philosophers who deny that animals possess any quality that is similar to humans, other than having a physical body.

If one were to adhere to the Cartesian view of animals, then animals would certainly be seen as lacking any quality that would entitle them to moral rights or moral status in general. Descartes believed that animals should be understood in purely mechanistic terms, in other words, animals are seen as mere machines. Descartes believed that "Animals are complex automata constructed by nature; except for their natural origin, they are what today we would call robots."[21] Animals were seen as completely material substances devoid of consciousness; in order to have consciousness, one has to possess an immaterial mind, which only humans possess, according to Descartes. He states: "...whence it must be morally impossible that there should exist in any machine a diversity of organs sufficient to enable it to act in all the occurrences of life, in a way in which our reason enables us to act."[22] The apparent consciousness of animals was judged as being mere sensory reactions to the environment.[23] Descartes established two tests to determine whether or not beings had minds: the first being

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[19] *Magpies, Monkeys, and Morals: What Philosophers Say about Animal Liberation,* p 19.
[20] *Magpies, Monkeys, and Morals: What Philosophers Say about Animal Liberation,* p 19.
[21] *Magpies, Monkeys, and Morals: What Philosophers Say about Animal Liberation*, p 26.
[22] Rene Descartes' 'Discourse V' from *Animal Rights: A Historical Anthology,* p 15.
[23] *Magpies, Monkeys, and Morals: What Philosophers Say about Animal Liberation,* p 27.

whether or not they could communicate thoughts verbally or through signs; the second test is the ability to perform a variety of actions (as opposed to just one or two) very well. Since animals cannot effectively communicate verbally, or by using signs, they were seen as not having a mind. Recently it has been shown that chimpanzees can acquire the ability to communicate through the use of American Sign Language, as will be discussed in a subsequent chapter of this paper, which may have lead Descartes to reconsider their status as mere machines. Through studies such as Jane Goodall's research, primates have also shown the ability to do a variety of things well, such as use tools, establish social ranks, gather foods, wage wars on other chimpanzees etc., which would be grounds to consider them for the possession of an immaterial mind, according to Descartes' beliefs.

The positions on the moral status of animals have generally been centered on animals lacking a specific quality, which has been the reason for denying them moral status. Kant's position is no different; he believes that animals cannot be moral agents because they lack reason and autonomy. Human beings ought to be treated as ends-in-themselves because of their autonomy; they should never be used as tools, or a means to an end. Their autonomous status makes human beings moral agents because "...they are able rationally to consider different courses of action and choose among them on the basis of understanding right and wrong."[24] Animals have no moral status, according to the Kantian view, because they are not autonomous beings capable of moral choice. This did not mean Kant would condone treating animals badly; he thought that "Tender feelings towards dumb animals develop humane feelings towards mankind", so animals should not be mistreated.[25] Kant's position on the moral status of animals, as well as

[24] *Magpies, Monkeys, and Morals: What Philosophers Say about Animal Liberation,* pg 34.
[25] Immanuel Kant's 'Lectures on Ethics – Duties Towards Animals and other Spirits' from *Animal Rights:*

other positions expounded by pre-Kantian philosophers, differs from modern positions which have been developed after the wide acceptance of the theory of evolution.

Contemporary positions on the moral status of animals are strongly influenced by Darwin's view of the evolution of species, which holds that all species on earth evolved from earlier species.

> Over the last century and a half , Darwinian theory, supplemented by the science of genetics, has undermined the traditional view that human-beings are the pinnacle of creation and that a profound gulf separates them from the other living creatures on the planet.[26]

Human beings are now viewed as part of the animal kingdom, and even belonging to the primate family. The differences between species are seen as being in degree only, and there is no longer a vast separation between human beings and animals that is based on the possession of certain faculties, such as reason. This paradigm has had a major impact on how current philosophers are forming their views on the moral status of animals.

Animal Liberationists believe that discrimination based on species membership is as unjustified as discrimination based on sex, race, or religion. They believe that animals are equal in moral status to human beings, and the suffering of animals must not count for less than the suffering of human beings.

> After all, pain is pain, and if we think that suffering is generally to be avoided [...] what difference can it make, in terms of badness of suffering, whether the creature can do arithmetic, or whether it can play the violin, or whether it can read a philosophy book?[27]

According to Animal Liberationists, animals must not be treated as resources for human use any longer. They believe that the oppression of animals is similar to the historic

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A Historical Anthology, p 127.

[26] *Magpies, Monkeys, and Morals: What Philosophers Say about Animal Liberation,* p 38.

[27] *Magpies, Monkeys, and Morals: What Philosophers Say about Animal Liberation,* p 12.

oppression of women and other minorities and factions of society that have been marginalized and discriminated against based on arbitrary criteria.

Feminist positions may or may not view animals as being historically oppressed in a similar manner to women. Eco-feminists find a link between the domination found in human society and the attitudes of human domination over the non-human world. Since they reject all kinds of domination, it is therefore wrong to oppress animals in their eyes.

> The concern for animal rights is thus seen as a logical extension of the more general feminist concern for nature of for less privileged human groups, all of whom are seen to share some features of oppression within the patriarchal society.[28]

However, other branches of feminist thought may not agree with this, and would argue that ethical considerations should be based on relatedness. The ethics of care, which is often seen as a feminist system of ethics, views relatedness as the central concern of ethics, which leaves little room for the consideration of animals, other than personal pets or companion animals.[29] A consensus has not been reached in the feminist school of thought in regard to our relationship towards animals.

The utilitarian perspective, which will be examined in-depth later in this thesis, like the animal liberationists, views the ability to suffer as the main criterion for granting moral status to beings. This perspective maintains the moral claim to maximize the good and minimize the harm, and can be used to argue for or against animal research.[30] On the animal activist side, which wants to promote the moral status of animals as being worthy of similar consideration given to humans; they argue that animal research produces more suffering than benefits. Jeremy Bentham, the founder of utilitarianism,

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[28] Lynda Birke's 'Women, Feminism, and Biology' from *Animal Rights: A Historical Anthology,* p 175.
[29] *Magpies, Monkeys, and Morals: What Philosophers Say about Animal Liberation,* p 22.
[30] *Contemporary Issues in Bioethics,* p 438.

identified suffering as a key harm against sentient creatures.[31] The animal research side responds to this argument by stating that more benefits have arisen out of animal research than suffering, so the suffering is justified. In the next chapter, this dilemma of whether or not the principle of utilitarianism promotes the use of animals in research, or sees it as an unjustified practice will be examined.

Another contemporary perspective on the moral status of animals, which is found in the history of western philosophy, even if it was not widely accepted, can be called the "reverence for life" position. It states that our moral concern should extend beyond sentient creatures to all life because all life exhibits the will to live. This view-point was founded by Albert Schweitzer, who believes that the justification for injuring life means that such injury must be necessary and unavoidable.[32] This position is similar to Buddhist ethics which will be examined in a subsequent chapter.

1.2 The Debate Surrounding Animal Research

Rowan and Loew have identified three periods of debate surrounding animal research.[33] The first of these periods takes place from the 1860s until World War I. Animal research had become an important method of laboratory investigation during that time, as well as a source of public controversy. The public found the idea of inflicting harm on animals in order to learn more about health and medicine to be disturbing. This opposition to animal research reached its peak in the United States around the 1890s, and then began to decline.[34] During WWI the animal research issue became marginalized. The second period of debate spanned from 1920-1950, when animal research continued

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[31] *Contemporary Issues in Bioethics,* p 438.
[32] *Contemporary Issues in Bioethics,* p 439.
[33] *The State of the Animals 2001,* p 111-120, "Animal Research: A Review of Developments, 1950-2000" by: Andrew N. Rowan & Franklin M. Loew.
[34] *The State of the Animals 2001,* p 111.

to develop as a way to find new biological data and potential cures for disease. During this time, opposition to animal research was sporadic and of little consequence. The latest period of debate about animal research begins after 1950.[35]

A survey conducted in the late 1950s indicated that 17 million animals were being used in laboratories in the United States.[36] In Canada, the 1950s and 1960s were a period of considerable growth in animal research for biomedical sciences.[37] After World War II, the U.S. government began to fund scientific and biomedical research. The discoveries of the polio vaccine in 1955 and antibiotics contributed to research interest, and the demand for laboratory animals increased. Laboratory use of animals reached its peak in the 1970s, and then began a downward trend; by the 1990s, laboratory animal use was estimated to have declined by 50% from its 1970s peak.[38] This was due to the wide acceptance of the three Rs for animal experimentation proposed by Russell and Burch: reduction, replacement and refinement (discussed below).

Another reason animal use declined was because of the changing attitudes of the public toward animal experimentation. In 1948, a Gallup Poll for the American Medical Association found that 85% of people polled favoured the use of live animals in medical teaching and research. This is opposed to a similar poll conducted in 1985 by the Baylor University Center for Community Research and Development, which found that only 58.5% of people polled favoured the use of live animals for medical teaching and research.[39] Public pressure and the three Rs alternative influenced national legislation throughout the developed world. Procurement of disease-free animals also became more

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[35] *The State of the Animals 2001,* p 111.
[36] *The State of the Animals 2001,* p 9.
[37] *Guide to the Care and Use of Experimental Animals,* p 1.
[38] *The State of the Animals 2001,* pg 9.
[39] *The State of the Animals 2001,* p 10.

expensive and so did all aspects of research, which further lead to the reduction in the number of animals used in experiments. Although there was a decline in overall animal use, the decline in mouse use was actually reversed in the 1990s as researchers began to maintain breeding colonies of genetically engineered strains of mice that were not available from commercial suppliers.[40] Laboratory rodent breeding is a relatively wasteful process in terms of animal life and economic efficiency. Transgenic animals, such as mice, may experience more distress than other animals from the specific deficits caused by genetic modification. Cryogenic technology could reduce the sum of animal distress by allowing institutions to store more strains of genetically modified mice.[41]

The changes in attitudes over the last twenty-five years favour the greater protection of animals, and have resulted in legislation, such as the Animal Welfare Act in the United States.[42] Government centers devoted to the regulatory acceptance of alternative methods were established in the 1990s, which seemed to indicate that animal research was entering a new and promising era from an animal protection standpoint.[43] A rising issue that will take precedence over the next few decades involves problems with the ways to measure animal pain and distress. Some proposed ways of dealing with this problem are developing scoring schemes, and monitoring weight-loss as an index of distress; but distress may be too complex of a problem for the development of an unequivocal empirical measure. Another main issue which will be focused on in this thesis is the use of non-human primates (NHP) in animal research. Approximately 50,000 NHP are in United States research facilities, and the Third World Congress on

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[40] *The State of the Animals 2001,* p 10.
[41] *The State of the Animals 2001,* p 116-118.
[42] *The State of the Animals 2001,* p 55.
[43] *The State of the Animals 2001,* p 10.

Alternatives in 1999 featured a session that proposed the end of NHP use in laboratories. There has been widespread support among protection agencies for the retirement of many laboratory chimpanzees to sanctuaries.[44]

As it stands at present there are two poles to the views on animal research: at one end of the spectrum are the animal activists, and at the other end are the scientists conducting animal research. "Animal activists aggressively argue that activities such as the use of animals in the scientific research and the consumption of animal flesh involve considerable animal suffering and are unethical."[45] Although animal activists and scientists appear to be at opposite ends of the debate on animal research, there are ten points that DeGrazia proposes that they can agree on.[46] These ten points include the following: 1) the use of animals in biomedical research raises ethical issues, 2) sentient animals deserve moral protection, 3) many animals are capable of having a wide variety of adverse mental states, 4) animals' experiential well-being deserves protection, 5) humane care of highly social animals requires access to conspecifics, 6) some animals deserve very strong protection, 7) alternatives should be used whenever possible and research on alternatives should expand, 8) promoting human health is an important goal, 9) there are some morally significant differences between humans and animals, and 10) some animal research is justified. DeGrazia also establishes four points on which agreement between animal activists and scientists are unlikely: 1) the moral status of animals in comparison with humans, 2) specific circumstances in which the goal of promoting human health justifies harming animals, 3) whether current protections for

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[44] *The State of the Animals 2001,* p 117-118.
[45] *The State of the Animals 2001,* p 55.
[46] *The Animal Ethics Reader* ed. Susan J. Armstrong & Richard G. Botzler. Routledge, London. 2003, p 252-257. "The Ethics of Animal Research: What are the Prospects for Agreement?" by: David DeGrazia.

animals in research are adequate, and 4) whether or not an animal's life is morally protectable.[47] These problems are the central themes of the debate surrounding the use of animals in research, and therefore, are of concern to the current project of applying utilitarian and Buddhist ethical perspectives toward animal research. The four points of contention between animal researchers and animal activists could be settled by adopting a specific moral attitude towards animals; by using utilitarianism and Buddhist ethics to guide animal research, it could establish a paradigm with which to find a solution to these problems that have to do with the moral status of animals, and the extent that human use of animals can be justified. The benefits of animal research must be examined in order to understand why it is a standard practice despite the disputes that have arisen.

1.3 The Benefits of Animal Research

There are six categories of laboratory animal use. They are education, drug discovery, toxicity testing, biological agent testing, medical diagnosis, and other research, including immunology, microbiology, oncology, zoology etc. Rowan and Loew have proposed some possible statistics for animal use in research. They suggest that less than 5% of research using animals is for diagnosis, less than 10% is for education, 20-25% is for the production and testing of vaccines, 35% is for drug discovery and the development of new medical devices and treatments, and 30% is for basic research. [48]

Many medical advances have resulted from research involving animals. These advances have shaped the current base of medical knowledge and have helped improve human lives, all of which may not have been possible if not for information gained from doing research on animals. There are five areas where knowledge gained from animal

[47] *The Animal Ethics Reader,* p 258-259.
[48] *The State of the Animals,* p 112.

experimentation has lead to human medical benefits. These areas are 1. basic biological and biomedical research, 2. cancer research, 3. applied biomedical research, 4. the development of new drugs and the extraction of products, and 5. toxicology. [49] Basic biological and biomedical research has identified characteristics and the location of receptor sites for drugs, as well as important advances in the study of neurotransmitters. [50] These studies resulted in the development of drug therapies for disorders, such as peptic ulcers, depression, and schizophrenia. Biomedical research using animals to establish knowledge about renal functions, as well as water and electrolyte balances contributed to the development of the artificial kidney. Immunology studies conducted on animals have resulted in the development of surgical techniques used in organ transplants. There are a wide variety of animals used in biological and biomedical research, although rats and mice are the most common.[51]

A major area that has been advanced by animal research is cancer research. The use of animals has lead to an increased understanding of cellular proliferation, and the identification of genetic mechanisms. These have all greatly increased the medical community's overall understanding on how cancer develops. These developments could lead to new treatments and possible cures for various forms of cancer. The animals most commonly used in cancer research range from fruit flies, mice, and rhesus monkeys, to humans. [52]

Applied biomedical research has beneficially contributed to the treatment of many

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[49] These areas are based on the Categories of Research as distinguished in *Darwinian Dominion: Animal Welfare and Human Interests*, by: Lewis Petrinovich. (Chapter 10) MIT Press. Cambridge, Mass. 1999. pp. 276-287. Petrinovich uses 7 categories, I have condensed it to 5 areas where beneficial knowledge has been gained, for simplicity.

[50] *Darwinian Dominion: Animal Welfare and Human Interests,* p 276.

[51] *Darwinian Dominion: Animal Welfare and Human Interests,* p 277.

[52] *Darwinian Dominion: Animal Welfare and Human Interests,* p 278.

different types of illness. Animal research has helped to advances in research on

> …aging, AIDS, anaesthesia, autoimmune diseases, basic genetics, neurosurgical procedures to treat behaviour disorders, diseases and defects of the cardiovascular system, childhood diseases, cholera, convulsive disorders, diabetes, gastrointestinal tract surgery, hearing, haemophilia, hepatitis, infectious malaria, muscular dystrophy, nutrition, ophthalmology, organ transplant, Parkinson's disease, treatment of pulmonary disease and injury, prevention of rabies, radiobiology, reproductive biology, surgery of the skeletal system, treatment of spinal cord injuries, toxoplasmosis, trauma and shock, yellow fever, and virology.[53]

All of the advances made in these areas, that contribute to the alleviation of human suffering, may not have been possible without animal medical research.

The fourth area where animal research has contributed to the alleviation of human suffering is the area of drug development and the extraction of products. Hormones, such as insulin, are extracted from animals in the slaughterhouse and can be used to treat human ailments. Animals are also used to produce antisera vaccines and antibodies; for example: the smallpox vaccine is developed on the skin of calves or sheep. [54]

Animal research, medical and commercial, has led to knowledge in the area of toxicology. Animals have been used to test the toxicity of products, such as cosmetics, toiletries, drugs, and pesticides. [55] Although this category does not exclusively involve experimentation, it is important to note because it is a major area of animal use. Now that we have looked at some of the important benefits of animals research, the current paradigms guiding research can be examined.

1.4 The Current Paradigm: The Three Rs

In *The Principles of Humane Experimental Technique*, Russell and Burch set the

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[53] *Darwinian Dominion: Animal Welfare and Human Interests,* p 280.
[54] *Darwinian Dominion: Animal Welfare and Human Interests,* p 281-282.
[55] *Darwinian Dominion: Animal Welfare and Human Interests,* p 287.

standards for the current acceptable practice for animal medical research.[56] In this publication, they set out the three Rs technique, which includes the practice of replacing, refining and reducing animal use in research and experimentation. The three Rs have been widely accepted in the animal research community, and set the standard for current research in North America and the United Kingdom. Russell and Burch have proposed that evidence based on animal behaviour can build a tentative case for consciousness in animals.[57] They make the case that lower vertebrates function in a similar manner to neurotic humans because they have a restricted scope of behaviour, and that the mood that a lower vertebrate is in at any moment restricts the scope of its attention.[58] Lower vertebrates can only react to limited features of their internal and external environments. Humans can chose to direct their focus of attention from moment to moment, lower vertebrates cannot. "The sequence of moods in a lower animal…is rigidly controlled by internal and external changes according to a code of rules, largely pre-set for a given species."[59] Russell and Burch conclude that lower animals are especially vulnerable to unpleasant conditions because an animal in stress can likely only attend to its own misery.[60] According to Russell and Burch, the thresholds for pain and distress in animals are not identical, and in certain instances fear may become an acutely unpleasant state that may be akin to human anxiety.[61] In the wild, this type of anxiety state would never persist because an animal would be able to modify it by expression and/or a reduction of one or another drives by displacing, redirecting, or removing the cause of the conflict

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[56] *The Principles of Humane Experimental Technique.* W.M.S. Russell and R.L. Burch. Charles C. Thomas Publishers; Illinois, 1959.
[57] *The Principles of Humane Experimental Technique,* p 16.
[58] *The Principles of Humane Experimental Technique,* p 16-17.
[59] *The Principles of Humane Experimental Technique,* p 17.
[60] *The Principles of Humane Experimental Technique,* p 17.
[61] *The Principles of Humane Experimental Technique,* p 20-22.

situation in a short amount of time.[62] In a laboratory, an animal does not have access to this strategy of alleviating distress, so the state of anxiety can persist. Russell and Burch proposed the three Rs in order to minimize such animal suffering.

The first of the three Rs is *replacement* or comparative substitution. The replacement technique involves "any scientific method employing non-sentient material which may in the history of experimentation replace methods which use conscious living vertebrates."[63] Russell and Burch define non-sentient material as higher plants, micro-organisms, and metazoan endoparasites. There are two types of replacement: relative and absolute. Relative replacement occurs when animals are still required for research, but they are not exposed to distress. Absolute replacement occurs when no animals are used at all in the research process.[64]

Reduction, the second of the three Rs, can occur by right choices made in planning and performance strategies in the lines of research. This means that planning research strategies can be employed that minimize the use of animals. There are two options for reduction: trial and error, and testing deductions from "well and consciously formulated hypotheses."[65] The problem with this technique is the problem of variance in animals. Because individual animals vary, there needs to be a statistical sample of the population included in the research in order to achieve the most accurate results.[66]

The final R, as set out by Russell and Burch, is *refinement*. To employ this technique in research requires the art and ability to improvise.[67] The objective of refinement is:"...to reduce to an absolute minimum the amount of distress imposed on

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[62] *The Principles of Humane Experimental Technique,* p 22.
[63] *The Principles of Humane Experimental Technique,* p 69.
[64] *The Principles of Humane Experimental Technique*, p 69.
[65] *The Principles of Humane Experimental Technique,* p 105.
[66] *The Principles of Humane Experimental Technique,* p 107-108.
[67] *The Principles of Humane Experimental Technique,* p 134.

those animals used."[68] The three R's are meant to reduce the suffering and distress that animals may face in husbandry, as well as in actual research and experimentation processes.

1.5 Current Canadian Standards and Policies

The three Rs have guided the formulation and implementation of policies in Canada, the United States and Europe. In order to understand how the current paradigm affects the practice of animal research, it is useful to examine the guidelines that govern standards of practice in one of these regions. In Canada, all experimental care and use of animals must meet the requirements of the Canadian Council on Animal Care [CCAC].[69] The CCAC is a national, peer review organization, which was founded in Ottawa in 1968. Its mandate is "to work for the improvement of animal care and use on a Canada-wide basis."[70] As Canadian research and teaching in the biomedical sciences flourished in the 1950's and 1960's, so did public concern for scientific awareness of ethical responsibility. This lead to the founding of the CCAC, which within its first year of existence published animal use guidelines entitled *Care of Experimental Animals, a Guide for Canada*. That first guide included demands for the use of non-sentient creatures whenever possible, the provision of humane care and treatment for animals, minimal pain and discomfort, and the avoidance of unnecessary use of animals.[71] Since its inception, the CCAC has contributed to improved housing and management practices in animal research in Canada.

The contemporary CCAC is comprised of twenty organizations, including

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[68] *The Principles of Humane Experimental Technique,* p 134.
[69] Canadian Council on Animal Care: *Guide to the Care and Use of Experimental Animals,* ed. Ernest D. Olfert, DVM, Brenda M. Cross, DVM, and A. Ann McWilliam. Vol. 1, 2nd edition. 1993. [CCAC *Guide*].
[70] *Guide to the Care and Use of Experimental Animals,* p 1.
[71] *Guide to the Care and Use of Experimental Animals,* p 1.

scientists, educators, and representatives of industry, as well as members of the animal welfare movement. The CCAC assessment panels are responsible for the evaluation of animal care and use in Canadian universities and community colleges, as well as government labs, and commercial labs. In-depth assessments of these institutions usually take place every three years, and unannounced visits can be conducted if the panel or the CCAC feels that conditions at an institution call for an extra visit, or if this is requested by the institution. [72] This ensures that institutions conducting animal research are closely monitored for any violation of the CCAC's current *Guide to the Care and Use of Experimental Animals*. Each institution conducting animal research must also have an Animal Care Committee [ACC] in place to ensure proper conduct; these committees are directly responsible to the institution. Membership in the ACC should include the senior scientists involved in the animal research, a veterinarian, a non-animal user, and at least one person responsible for community interests and concerns. The ACC at each institution has the authority to stop objectionable procedures where it feels that unnecessary pain is being inflicted on an animal, terminate any use of animals that strays from the original approved proposal or that is causing pain or distress to an animal, and humanely kill an animal if its pain or distress cannot be alleviated. [73] No animal research, testing project, or teaching programs, can take place at an institution without approval from the ACC, and no animals can be acquired for research without the approval of the ACC. The ACC's basic function is to monitor animal research and ensure that the animals are not being subjected to undue stress, pain or discomfort, and to help eliminate the unnecessary use of animals altogether.

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[72] *Guide to the Care and Use of Experimental Animals,* p 2.
[73] *Guide to the Care and Use of Experimental Animals,* p 8.

The CCAC's position statement on the well-being of animals was adopted from the 1990 publication, *Social and Behavioural Requirements of Experimental Animals*. There are two components to animal well-being, the physical and the behavioural. According to the CCAC, physical well-being is shown by the state of clinical health, whereas the behavioural well-being is displayed through behaviour that is considered normal for that species and strain of animal, along with the absence of significantly abnormal behaviour. Behavioural well-being is considered to be a reflection of psychological well-being. The CCAC believes that animal behaviour can convey pleasurable brain-states in animals that represent an animal's well-being; they are concerned with promoting pleasurable brain-states in research animals to ensure their comfort. The source of pleasurable psychological states is considered to be a function of the brain, qua the central nervous system; thus, there is no need for the current standards of practice to determine whether or not animals have "minds" in the Cartesian sense. A social environment is desirable for certain animals because it allows for social contacts, as well as positive social relations; this social behaviour assists animals in coping with the circumstances of containment. The caging for various species should be environmentally enriched and species appropriate; chronic isolation should not occur unless scientifically or biologically justified. Positive interactions with humans are also desirable for the well-being of some species, especially for those individual animals kept in conditions of social isolation. [74]

The CCAC in their *Guide to the Care and Use of Experimental Animals* set out specific guidelines on how to handle and care for animals at every stage of research; these are meant to ensure the animals' well-being. They specify how animals are to be

[74] *Guide to the Care and Use of Experimental Animals,* p 52.

housed to maximize comfort for each species, such as recommending, for example, the cage size appropriate to each species that should ensure comfort and animal safety. [75] Where a mixing of species is unavoidable, the facility should make an effort to place animals that are behaviourally compatible together and that have similar environmental requirements. [76] According to the CCAC, all facilities conducting animal research should have a "Standard Operating Procedure for Animal Care" in place. All animals should be observed at least once a day, and staff should have the proper training in order to handle the animals. Successful handling often requires the ability to recognize the animal's state of mind, as demonstrated by its behaviour, and proper training is imperative to provide consistency in handling. [77]

When an animal is being housed in a research facility, it is important that it receive proper care, and the CCAC has set out some recommendations on how each facility should care for their research animals. These animals should be provided with adequate amounts of nutritional, wholesome food, and drinking water should be available to the animal at all times, unless experimental protocol designates otherwise. [78] Although experts disagree about the amount of exercise needed in laboratory animals, the CCAC recommends that exercise requirements for an animal should reflect its species, age and environment. The judgment regarding an animal's exercise should be made by a veterinarian in consultation with the prime researcher. [79]

Animals not only require proper physical care, they also have social and behavioural requirements that must be met by the experimental facility. In the past it was

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[75] *Guide to the Care and Use of Experimental Animals,* p 18.
[76] *Guide to the Care and Use of Experimental Animals,* p 44.
[77] *Guide to the Care and Use of Experimental Animals,* p 43.
[78] *Guide to the Care and Use of Experimental Animals,* p 45.
[79] *Guide to the Care and Use of Experimental Animals,* p 46.

enough for the facility to provide adequate cages that could contain the animals hygienically and facilitate husbandry, while minimizing husbandry variations. Now there is increasing importance placed on reducing animal stress, and improving social and behavioural well-being. Environmental enrichment may or may not result in increased expenses, but the CCAC considers that there is an immediate benefit to the animal, researcher and research if this is taken into consideration. In order to assess the affect of the environment on the animal, the CCAC has set up guidelines on animal well-being and welfare. They define animal well-being and welfare as the state of the animal in regard to its coping with the environment; this state is not only physical, but psychological as well. [80] The CCAC believes that animals have a natural dignity that is due to them as sentient creatures. An animal's well-being is threatened when a) its space is insufficient for maintaining a behaviourally adequate distance from the other animals, b) feeding or resting space is insufficient and cannot be accomplished concurrently, c) regrouping of the animals is performed so frequently that the animals must continually repeat the stabilization process, and d) group size is not appropriate for the species. [81] If the animal's well-being is threatened, not only does that impact the animal adversely, but it can also have an adverse impact on the results of the research being conducted. It is thus assumed that it is beneficial to the animal and to the research to follow the CCAC's guidelines on animal care.

Summary

In this chapter I have examined the use of animals in medical research, including the contemporary use of animals in medical research, the current issues or debates

[80] *Guide to the Care and Use of Experimental Animals* pg 51.
[81] *Guide to the Care and Use of Experimental Animals* pg 52.

surrounding their use, and the current standards of practice. The historical outline regarding the moral status animals was an important introduction to the project of examining the practices of animal research. There is an ongoing debate surrounding animals moral standing which will be further explored in the next two chapters, in terms of the utilitarian and Mahayana Buddhist perspectives. The second portion of the chapter built on the historical ethical debate by examining some of the issues surrounding the use of animals in medical research. Both of the first two sections of this chapter demonstrated that attitudes towards animals and their moral standing have greatly changed over the course of western history.

The third part of this chapter examined the benefits of animal research. The knowledge gained from animal experimentation has greatly improved the human condition. Without animal experimentation, it is likely that many of the indicated advances would not have occurred. It also demonstrates the importance of debate around the issue of animal research.

The fourth section of the chapter explained the current standards of practice for animal research in North America and the United Kingdom; these are the three Rs. This practice will come under scrutiny in the next two chapters. The three Rs consider the interests of the animals as these standards set out to minimize their stress and suffering. The final section built upon this paradigm by looking at the practices and policies in Canada, that intend to ensure research animals are treated humanely, following the three Rs. Using the Canadian Council on Animal Care's *Guide to the Care and Use of Experimental Animals,* that part of the chapter examined some of the current policies. It appears that animal research and animal welfare are taken very seriously in Canada.

Based on the above discussion, animal research is definitely a contemporary dilemma worthy of philosophical consideration. The next two chapters will examine this dilemma, first from a utilitarian perspective, which is a common way to approach bioethical problems, and then from a Buddhist ethical perspective, which may have something new to offer to the historically western philosophical debate surrounding the moral status of animals and their use by humans.

Chapter 2: Utilitarianism and Animal Research

This chapter will attempt to explain the moral theory of utilitarianism and how it can be applied to animal research. The first part of this chapter will explicate the utilitarian principle as laid out by Jeremy Bentham and John Stuart Mill. Following the explication of the principle of utility, further additions to the theory made by various other scholars will be explored. Once the utilitarian theory is outlined, the chapter will proceed to explain why and how it applies to animal research. It will conclude by applying utilitarianism to three case studies involving animal research.

2.1 The Principle of Utility

This section will rely exclusively on the works *An introduction to the Principles of Morals and Legislation* and *Utilitarianism,* by Jeremy Bentham and John Stuart Mill, respectively.[1] Although there has been much written on utilitarianism, these two philosophers can be considered as laying its foundation most thoroughly. Some of the additions and amendments to the basic principle, propounded by Bentham and Mill, will be explored in the following section.

Bentham begins his explication of the principle of utility by stating that pain and pleasure govern humankind, and these alone should determine what we ought to do and what we will do.[2] The chain of causes and effects, as well as the ideas of right and wrong are fixed firmly to pain and pleasure. The principle of utility recognizes human beings' subjugation to pain and pleasure. Mill (later) asserts the principle of utility or the greatest happiness principle as the first principle of ethics.

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[1] *The Utilitarians*. Dolphin Books; Doubleday and Company inc. New York. 1961. This source contains the texts: *An introduction to the Principles of Morals and Legislation,* by Jeremy Bentham and *Utilitarianism,* John Stuart Mill; it will be used as a primary source for this chapter.

> The creed which accepts as the foundation of morals utility of the greatest happiness principle holds that actions are right in proportion as they tend to promote happiness, wrong as they tend to produce the reverse of happiness.[3]

According to Mill and Bentham, the principle of utility acknowledges actions in regard to their ability to produce pain or pleasure. The action which produces the most pleasure for all those affected, and the least amount of pain, would be considered the right action, according to the principle of utility.

> By the principle of utility is meant that principle which approves or disapproves of every action whatsoever, according to the tendency which it appears to have to augment or diminish the happiness of the party whose interest is in question: or, what is the same thing in other words, to promote or to oppose that happiness.[4]

Utility is derived from the property in any object that tends to produce benefit, pleasure, good, advantage, and happiness, or prevent mischief, pain, evil or unhappiness to any interested party, according to Bentham.[5] Both philosophers consider happiness or pleasure to be the ultimate goal of all moral actions; thus, this principle can determine what we ought and ought not to do. When the goals of human action are taken into account, it is happiness that serves as the highest or ultimate goal of all actions.

> Nor is there any school of thought which refuses to admit that the influence of actions on happiness is a most material and even predominant consideration in many of the details of morals, however unwilling to acknowledge it as the fundamental principle of morality and the source of moral obligation.[6]

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[2] Bentham, *The Utilitarians*, p 17.
[3] Mill, *The Utilitarians*, p 407.
[4] Bentham, *The Utilitarians*, p 17.
[5] Bentham, *The Utilitarians*, p 18.
[6] Mill, *The Utilitarians,* p 404.

In order to acknowledge the principle of utility as the fundamental principle of morality, as Bentham and Mill do, happiness must be seen as the only true goal of humanity. All other goals, such as the pursuit of intellectual gains or economic wealth, are only striven for because they are expected to bring happiness. Mill contends that happiness is the only goal that can be proven to be good in-itself; that is, all other goals cannot be proven to be good-in-themselves, they can only be good in relation to the amount of happiness they produce. According to Mill, "Whatever can be proved to be good, must be so by being shown to be a means to something admitted to be good without proof."[7] This means that actions such as charity, generosity, intellectual pursuits, fame, power, virtue etc. can be considered good in that they produce happiness, which is the only thing that is good in-itself. "In other words, this state of the will is a means to good; and does not contradict the doctrine that nothing is good to human beings but in so far as it is either itself pleasurable, or a means of attaining pleasure or averting pain."[8] He defines happiness as pleasure and the absence of pain, and unhappiness is considered to be pain and the privation of pleasure. Pleasure and freedom from pain are the only things desirable as ends, according to Mill.[9]

Happiness can be measured in quality and quantity according to Mill, which allows for the distinguishing of lesser and higher pleasures.[10] The quality and quantity of pleasure must be taken into account when applying the principle of utility. Preference will be given to pleasures of the higher faculties by those acquainted with them. "Human beings have faculties more elevated than the animal appetites, and when once made

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[7] Mill, *The Utilitarians*, p 404.
[8] Mill, *The Utilitarians*, p 445.
[9] Mill, *The Utilitarians*, p 407.
[10] Mill, *The Utilitarians*, p 408.

conscious of them, do not regard anything as happiness which does not include their gratification."[11] Mill contends that humans know the satisfaction that they gain from higher level pursuits, such as intellectual gratification, which are more pleasurable than the more primal or animalistic pursuits associated with mere survival. Mill also points out that lower animals are more likely to have their pleasure needs fully satisfied because they require the least quality of pleasure.

> It is indisputable that the being whose capacities of enjoyment are low, has the greatest chance of having them satisfied; and a highly endowed being will always feel that any happiness which he can look for, as the world is constituted, is imperfect.[12]

One could argue the opposite of this and hold that the lower beings may also have the greatest capacity to suffer when their needs are not met because they have no way of mentally resolving their plight, whereas humans always suffer because their needs can never be fully met in an imperfect world.

Human beings differ from animals on two particulars, according to Mill: the first is that humans are capable of sympathizing with other humans and even other (sentient) creatures. The second difference is that humans have a more developed intelligence that gives a wider range to their sentiments, whether self-regarding or sympathetic. These two particulars allow humans to be capable of a calculated impartiality toward fellow humans and other (sentient) creatures when taking (moral) action, or actions which may cause pain or pleasure.

Bentham lays out four circumstances to consider when one is trying to establish the value of a certain pleasure or pain:1) intensity, 2) duration, 3) certainty or uncertainty,

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[11] Mill, *The Utilitarians*, p 408.
[12] Mill, *The Utilitarians*, p 410.

4) propinquity or remoteness.[13] The intensity of the pain or pleasure, as well as how long it will last is very important in establishing the action one ought to take: it may be hard to judge which is the right action in cases where the pleasure may only last a short time, but be very intense, as opposed to a sustained pleasure that is not very intense. One may have to judge the pleasure by quality, as laid out by Mill, to resolve these issues: if the sustained pleasure came from a source of intellectual enjoyment, whereas if the more intense, yet short lasting pleasure, was derived from a bodily pleasure, then Mill would recommend the intellectual pleasure. The certainty or uncertainty, and the propinquity or remoteness of the pleasure or pain occurring are important because one would not want to gamble when it comes to making an ethical decision, at least not anymore than necessary. Judging the worth of the possible pleasure or pain by these four circumstances is important if one is to correctly apply the principle of utility.

When the causal efficacy for pleasure or pain is considered for the purpose of establishing the likelihood of an act to produce said pleasure or pain, there are two circumstances that must be examined, according to Bentham. The first circumstance is the pleasure or pain's fecundity, or the chance that the sensation will be followed by sensations of the same kind.[14] The second circumstance to take into account is purity, or the chance that the pleasure or pain has of not being followed by sensations of the opposite kind.[15] For example, the sensation of imbibing an alcoholic drink may be pleasurable for a brief duration, but it is likely to be followed by sensations of pain the next day; therefore, that act possess neither fecundity nor purity. Using the previous four circumstances; intensity, duration, certainty and propinquity, as well as the consideration

[13]Bentham, *The Utilitarians*, p 37.
[14] Bentham, *The Utilitarians*, p 37.

of fecundity and purity, Bentham lays out how one is to calculate which action is morally best according to the principle of utility. One must sum up the value of the pain versus the pleasure which is likely to occur if one takes a specific action, according to the aforementioned variables; if the balance is on the pleasure side, then the action has a good tendency on the whole, if not, then it is bad. One must also take into consideration the number of people affected by the action and make sure that the balance of pleasure is as great as it can be for as many of them as possible.

Utilitarianism takes into account all those affected by an act as having equal interests; in other words, no ones' pain or pleasure should count anymore than anyone else's pain or pleasure. Any pain or pleasure that might be produced is judged according to how it could affect all those involved, with no one person counting as having anymore importance over anyone else. For example, if there was a choice between an action that could produce intense pleasure for one person with a little pain for others, or an action that would produce a small amount of pleasure for many people and no pain for anyone, then the latter action would be best.

Most humans naturally embrace the principle of utility, according to Bentham, because actions conformable to it have a tendency to augment the happiness of a community, rather than diminish it.[16] The principle of utility is to be applied to all moral decisions affecting the interested parties. The party can be the community in general or an individual, anyone who is affected by the action that is to take place.[17] This is true even for implementing legislation; the attainment of pleasure and the avoidance of pain

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[15] Bentham, *The Utilitarians*, p 38.
[16] Bentham, *The Utilitarians*, p 18-19.
[17] Bentham, *The Utilitarians*, p 18.

are ends which legislators ought to strive for, and thus they must understand the value of pain and pleasure.[18] According to Bentham, pleasures and pains are the instruments of legislators, who must remain impartial towards people who their legislation will affect.

Regarding the happiness of the actor and all others concerned, the actor must be completely impartial when making his/her ethical decisions based on the principle of utility. One should never favour anyone over anyone else, including oneself; everyone's interests must be considered as equal according to utilitarianism.

> [T]he happiness which forms the utilitarian standard of what is right in conduct, is not the agent's own happiness but that of all concerned. As between his own happiness and that of others utilitarianism requires him to be as strictly impartial as a disinterested and benevolent spectator.[19]

A person must not judge their own pain or pleasure as having more value than the other people who may be affected by an action. It is important that a person remain impartial when making an ethical decision in order to fulfill the standards of utilitarianism, which must consider all affected as having an equal stake in the outcome. Although this may be the hardest part to practically apply to ethical situations, impartiality is of the utmost importance if one is to correctly apply the principle of utilitarianism, which is meant to help humans in their ethical decisions find the action which will produce more pleasure than pain for all those concerned.

Bentham maintains that the more consistently the principle of utility is pursued the better off humans will be. "The principle of utility is capable of being consistently pursued; and it is but tautology to say, that the more consistently pursued, the better it

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[18] Bentham, *The Utilitarians*, p 37.
[19] Mill, *The Utilitarians*, p 418.

must be for humankind."[20] Although it has seldom been consistently pursued, Bentham holds that most people, via their natural constitutions, on most occasions, embrace the principle without thinking of it.[21] Mill likewise believes there is a powerful natural sentiment of social feelings in humankind: "The utilitarian morality does recognize in human beings the power of sacrificing their own greatest good for the good of others."[22] Utilitarianism promotes human objectivity when they make their ethical decisions, and allows for self-sacrifice for the greater good. This ability to sacrifice our own happiness for the greater good comes from our natural social feelings towards our fellow humans, this is

> `...the desire to be in unity with our fellow-creatures, which is already a powerful principle in human nature, and happily one of those which tend to become stronger, even without express inculcation, from the influences of advancing civilization.[23]

The truth of this statement can be seen with the progress of human civilization in the last couple of centuries: slavery is no longer as widely accepted, as it once was; racism is discouraged; women and minorities are gaining more rights throughout the world; and even the question of animal rights has become a legitimate concern.

2.2 Variations on Utilitarianism

In this section, variations on the principle of utilitarianism will be explored, including the distinction between act and rule utilitarianism, as well as other amendments and additions that have been made. The definition of utilitarianism has been altered by

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[20] Bentham, *The Utilitarians*, p 27.
[21] Bentham, *The Utilitarians*, p 19.
[22] Mill, *The Utilitarians*, p 418.
[23] Mill, *The Utilitarians*, p 434.

various authors in order to establish ways around certain critiques, or even to offer a critique of a certain aspect of utilitarianism.

In his article, "Utilitarian Morality", Henry Sidgwick defines utilitarianism as the ethical theory in which conduct is judged right under given circumstances, if it will produce the greatest amount of happiness on the whole when taking into account all of those affected.[24] He contends that this theory is also known under the name "universal hedonism". Sidgwick states that as universal happiness is taken to be the ultimate standard of this theory, it must not be mistaken for the claim that universal benevolence is the only right motive for action. If experience showed that general happiness would be more satisfactorily gained, when acting from motives other than universal philanthropy, then these motives would be preferred according to the utilitarian principles.[25] Sidgwick defines the greatest happiness as being the "greatest pleasure over pain, the pain being conceived as balanced against an equal amount of pleasure, so that the two contrasted amounts annihilate each other for purposes of ethical calculation."[26] He faults utilitarianism for being based on the assumption that all pleasures in its calculations are capable of quantitatively being compared to one another, as well as to all pain. Sidgwick proposes that every feeling of pleasure or pain has a degree of intensive quality, positive, negative or zero in respect of its desirability, and that the quantity must be known to some extent so that each may be roughly weighed in ideal scales.[27] Bentham most certainly had this in mind when he went to great lengths in his *Introduction to the*

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[24] *Utilitarianism Morality* by: Henry Sidgwick, as found in: *Moral Rules and Particular Circumstances.* Ed. Baruch A. Brody. Prentice Hall, Inc; New Jersey, 1970. p 37.
[25] *Utilitarianism Morality*, p 39.
[26] *Utilitarianism Morality*, p 39.
[27] *Utilitarianism Morality*, p 39.

Principles of Morals and Legislation to point out the circumstances that must be taken into account when weighing pleasures and pains in order to determine what action is best. To maximize happiness, it means to make as great as possible the sum of all elements of pleasure for all affected by such actions. This method has been charged with ignoring the idea of duty, which is seen as a problem for some authors.

Sir David Ross claims that the essential defect of utilitarianism is that it ignores the personal character of duty. We see this in his article, "What makes right acts right?".[28]

> If the only duty is to produce the maximum of good, the question who is to have the good whether it is myself, or my benefactor, or a person to whom I have made a promise to confer that good on him, or a mere fellow man to whom I stand in no such special relation – should make no difference to my having a duty to produce that good.[29]

This question is also of concern to Sidgwick, who offers the most suitable answer for the purpose of this project, and the principle of utility in general. It is important to answer the question whether the principle of utility is to be extended to humans only, or beyond to all sentient creatures, and thus having implications for animal research.

> We have next to consider who the 'all' are, whose happiness is to be taken into account. Are we to extend our concern to all those beings capable of pleasure and pain whose feelings are affected by our conduct? Or are we to confine our view to human happiness? The former view is the one adopted by Bentham and Mill, and (I believe) by the utilitarian school generally: and is obviously most in accordance with the universality that is characteristic of their principle.[30]

On this view, all sentient creatures are to be included in our pleasure/pain assessments. In accordance with this view point, the sections below will proceed to assess specific

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[28] *What Makes Right Acts Right?* By: Sir David Ross, as found in: *Moral Rules and Particular Circumstances.* Ed. Baruch A. Brody. Prentice Hall, Inc; New Jersey, 1970.
[29] *What Makes Right Acts Right?* p 69.

cases in animal research. It is the universal good (happiness or pleasure) which the utilitarian considers his/her aim and duty, "...and it seems arbitrary and unreasonable to exclude from this end, as so conceived, any pleasure of any sentient being."[31] The difficulty that arises from this, according to Sidgwick, is that it is hard enough to compare the pleasures and pains of certain humans, but to compare them with any and all sentient beings is even harder.[32]

Sidgwick contends that although practical utilitarian calculations may be very rough, this is not a reason for them not to be done as accurately as possible as the case admits. When trying to make utilitarian calculations, one must try to keep in mind the strict type of calculations that need to be made as if all relevant conditions could be established with mathematical precision.[33] This will be considered when applying utilitarianism to the problem of animal research.

Prior to moving on to the application of utility to cases of animal research, there is another problem with the theory that must be addressed. This is brought forward by Jonathon Harrison in his article, "Utilitarianism, Universalism and Our Duty to Be Just".[34] He points out that some actions may produce no good consequences, but are felt to be a duty to be performed because such actions would produce good consequences if generally performed, which is in accordance with rule utilitarianism, as opposed to act utilitarianism, which only considers each action on a case by case basis.

> Utilitarians...have not always failed to notice the fact that we think actions are right if they are of a sort which would produce good consequences if

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[30] *Utilitarianism Morality*, p 40.
[31] *Utilitarianism Morality*, p 40.
[32] *Utilitarianism Morality*, p 40.
[33] *Utilitarianism Morality*, p 42.
[34] *Utilitarianism, Universalism and Our Duty to Be Just*. By: Jonathon Harrison, as found in: *Moral Rules and Particular Circumstances*. Ed. Baruch A. Brody. Prentice Hall, Inc; New Jersey, 1970.

> generally practiced, or are wrong if they are of a sort which would produce bad consequences if other people did the same.[35]

If utilitarians admit that the performance of those actions is a duty, then Harrison holds that they are departing from the original principle of utilitarianism. This leads to the distinction between act versus rule utilitarianism. Act utilitarianism considers the consequences of doing a particular action; it judges each action strictly on an individual basis. Rule utilitarianism considers the consequences of an action on the basis of the general outcome when most people perform that same action; it judges actions generally, as if everyone were to follow a rule: do action X for happiness.[36] Actions permissible for the former definition of utilitarianism may not be permissible for the modified definition. Harrison offers a suggestion to this problem: "We should, I think, only apply a rule to a hard case if the gain which would result from failing to apply the rule in all cases as hard or harder exceeds the loss which would result from failure to apply the rule to those cases."[37] When applying the principle of utility it is preferable to judge every individual situation and not establish rules. However, there may be common cases that occur in which it is hard to assess which action would result in the more beneficial outcome, to these types of cases it may be permissible to establish a general rule that results in the more beneficial outcome the majority of the time. Harrison contends that the probability of other people doing the same action has a bearing on the duty to perform an action if it were to have good or bad consequences when everyone did the same.[38] Such decisions should take into account future actions of people: if a certain action will likely yield

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[35] *Utilitarianism, Universalism and Our Duty to Be Just*, p 102.
[36] These definitions are taken from the introduction to *Moral Rules and Particular Circumstances.* Ed. Baruch A. Brody. Prentice Hall, Inc; New Jersey, 1970.
[37] *Utilitarianism, Universalism and Our Duty to Be Just*, p 110.
[38] *Utilitarianism, Universalism and Our Duty to Be Just*, p 115.

better results, more pleasure than pain, most times that it is performed, then it can be adopted as a rule; that action can be seen as a duty when people are confronted with the choice of whether to perform it or not in a hard case, even if it may result in more pain than pleasure in that particular case. It takes into account the (hypothetical) future happiness that would result from the adoption of such a rule to guide actions; the net happiness will be greater if the rule is adopted, even if it is not greater in this particular instance. This is certainly something to take into account when pursuing the mathematical-like calculations of pleasure and pain that Bentham intended.

2.3 Applying the Principle of Utilitarianism to Case Studies in Animal Research

In applying utilitarianism to cases in animal research, the mathematical-like formula provided by Bentham, including intensity, duration, certainty, and propinquity, will be used to assess whether or not the research being conducted falls within utilitarian guidelines. This formula will be applied to three specific cases of animal research in order to demonstrate that utilitarianism may have a different answer to each case of research, while not having a definitive answer on the basic merit of animal research in general. This evaluation is taking place under the assumption that, as sentient beings, animals' pain and pleasure should be weighed equally to that of the pleasure and pain gained by the human researchers and humankind in general. The three cases to be investigated are well known cases of animal research that have been subject to media attention and debate among those for and against animal research.

The first case to be investigated is the case of "Head Injury Experiments on Primates at the University of Pennsylvania" that took place in the early 1980's.[39] These head injury studies were conducted under the direction of Thomas A. Gennarelli, an associate professor of neurosurgery at the University of Pennsylvania, at the campus in Philadelphia. Videotapes stolen by the Animal Liberation Front "...showed baboons in states of paralysis and incapacity and researchers who seemed indifferent to the distress of the animals."[40] People for the Ethical Treatment of Animals (PETA) contended that these videos documented violations of federal policies, including inadequate anesthesia and disregard of legally required surgical asepsis.[41] One of the videos showed pictures of "...a baboon repeatedly writhing on the table as a hydraulic piston hit the animals head."[42] The experiment proceeded by

> cement(ing) the baboon's head securely in a helmet and subjecting it to a sudden jerking movement delivered by a specially designed device that inflicted 'acceleration injury,' as in whiplash. The device could generate the equivalent of up to two thousand times the force of gravity.[43]

Neurological damage was caused to the soft brain mass moving inside the skull, resulting in paralysis and coma. The baboons used in this experiment were maintained in this helpless state for a period of up to two months after the inflicted trauma, after which they were killed and their brains were analyzed. The researchers conducting the experiment maintained that the anesthetics used were adequate during the procedure, but this claim is suspect. In order to sedate the animals for transportation from their holding cages they

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[39] *The Human Use of Animals: Case Studies in Ethical Choice.* By: F. Barbara Orlans, PhD, Tom L. Beauchamp, PhD, Rebecca Dresser, J.D., David B. Morton, BVSc, PhD, MRCVS, John P. Gluck, PhD; Oxford University Press; New York & Oxford, 1998. p 71-78.
[40] *The Human Use of Animals: Case Studies in Ethical Choice,* p 71.
[41] *The Human Use of Animals: Case Studies in Ethical Choice,* p 72.
[42] *The Human Use of Animals: Case Studies in Ethical Choice,* p 72.
[43] *The Human Use of Animals: Case Studies in Ethical Choice,* p 72.

were injected with the drug PCP, which was used to facilitate movement and restraint; but this drug is not a painkiller. In the room that the experiment was to be conducted, nitrous oxide was administered while the baboons were fitted into the helmets and various blood and other monitors were then inserted surgically. "Nitrous oxide is an inhalant general anaesthetic from which the animal can quickly recover consciousness and ability to experience pain. The nitrous oxide was withdrawn up to one hour before the head injury."[44] There was period of consciousness required before the injury was inflicted so that the baboons could be tested in terms of their motor reflexes:

> Just before the injury, animals were seen in the videotape with their eyes open, twisting on the table in an attempt to turn their bodies over, and in one instance a technician called out that the animal was 'awake' immediately before the injury. Some animals received repeated head blows.[45]

The reported purpose of the research "...was to develop an animal model to study the functional and anatomical effects of head injury."[46] An investigation into this research indicated that well-formulated hypotheses may not have been tested in this experiment, which is normally considered poor science. In order to maximize the knowledge gained by experimentation, a clear hypothesis is important in order to establish that for which the researchers are specifically looking. Without a clear hypothesis, it is unclear what knowledge researchers were expecting to gain, and what they were specifically intending to observe.

This research fails to be justifiable by the principle of utility. In evaluating the experiment, it is clear that the pain that the baboons experienced during and after the experiment far outweighs the benefits gained by the research. Using Bentham's criteria

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[44] *The Human Use of Animals: Case Studies in Ethical Choice,* p 73.
[45] *The Human Use of Animals: Case Studies in Ethical Choice,* p 73.

we can prove this to be the case. The intensity of the pain experienced was great for the baboon when the blows to its head were being inflicted by a device that could generate up to two thousand times the force of gravity. It seems apparent that the baboons could in fact feel this pain due to the evidence on the video tapes, which shows the baboons were awake, and the fact that nitrous oxide was stopped up to an hour prior to the infliction of the trauma. Without a clear hypothesis to test it is unclear what knowledge the researchers thought they would gain, and it remains unclear what knowledge they actually did gain; therefore, the pleasure gained by humans affected by the experiment is not sufficient enough to justify the amount of pain caused to the baboons. The knowledge gained from this research (if any) is limited (at best) and the pleasure gained not even close in terms of the measurable intensity of the pain experienced.

The duration of the pain experienced by the baboons may have been very short, considering that they were paralyzed or in a coma after the trauma was inflicted. It is hard to judge how much pain or mental suffering they endured after such a procedure, as it likely deprived them of their faculties, perhaps including the ability to sense pain. It is possible however, that they may have been in intense pain for up to two months before they were killed. The certainty of this aspect is unclear. The duration of the pleasure gained from the research could have been long-term, if the research had been conducting valuable and useful science that would have contributed to the treatment and alleviation of human pain from this type of injury. It does not appear that this research even had the possibility of alleviating human pain, without a clear hypothesis it is hard to gauge what the researchers had hoped to learn from this study.

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[46] *The Human Use of Animals: Case Studies in Ethical Choice,* p 73.

Granting that they are sentient beings, it was certain that the baboons experienced pain in order to conduct this research. As seen in the previous chapter in the discussion of the moral status of animals, sentient beings do experience pain, and are not automatons. Due to the weak foundation and conclusions of this research, it is unlikely that humans would gain any pleasure, or alleviation of pain from these experiments. Knowledge of the functional and anatomical effects of head injury surely could have been gained by studying humans who had already been subject to head injury. The knowledge thus gained in this research did not bring pleasure, nor happiness.

It was not a remote chance that pain would be experienced by the baboons, in receiving head injuries of such magnitudes. In fact, it was likely that there would be much pain experienced by the baboons. However, it would have been less likely to occur if proper anaesthetics were employed. The propinquity of the knowledge to be gained was fairly weak as well, especially since there was no clear hypothesis which would have established at least some form of knowledge that the researchers would expect to gain. Therefore, on all four criteria of evaluation as laid out by Bentham, this experiment fails ethically, according to the principle of utility. This case is a clear example of an instance in which utilitarianism would not justify such animal experimentation, unlike the next case to be examined which is not as clear-cut.

The second case to which utilitarianism is going to be applied is not quite as easy to assess as the first one, but it is equally as famous. This is the case of Washoe, the first chimpanzee to be taught American Sign Language (ASL).[47] Until she was five years old, Washoe lived with and was cared for by a "cross-fostering" human family, the Gardners.

She was cared for by them within an environment and routine that was similar to that of a human child, being taught various things, such as how to eat and drink with human utensils, to dress, and to use the toilet. She was always cared for, as chimpanzees under natural conditions rely on their mothers for most of their needs until they are two or three years old. She was never left alone, except when she was sleeping, and was used to being cared for by the same group of humans. They also fostered her development of ASL, using teaching methods similar to those used to teach human children with hearing impairments.

> In their time with Washoe, the Gardners and other members of Washoe's foster family used only ASL to communicate with her and among themselves on the assumption that this would provide the least confusing learning situation for Washoe.[48]

At the age of four, Washoe could recognize 132 ASL signs. Washoe was moved to the Institute for Primate Studies at the University of Oklahoma at age five, where she began living with other chimpanzees, and living part of her life in a cage, being on a leash when she was let out. "She no longer received the intense human attention she had been given in her early years."[49] Roger Fouts undertook a new study at the Institute in which other chimpanzees were taught ASL, and communication was observed between them.

After Washoe's own infant died, she was given a new one that she adopted as her own and began to teach signs to. This chimpanzee's name was Loulis. They were both moved to a new housing facility, at Central Washington University when Loulis was about a year old, with improved living quarters, indoor and outdoor exercise rooms, and a

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[47] This case is also taken from: *The Human Use of Animals: Case Studies in Ethical Choice.* By: F. Barbara Orlans, PhD, Tom L. Beauchamp, PhD, Rebecca Dresser, J.D., David B. Morton, BVSc, PhD, MRCVS, John P. Gluck, PhD; Oxford University Press; New York & Oxford, 1998. p 139-147.
[48] *The Human Use of Animals: Case Studies in Ethical Choice,* p 140.

human observation area. They lived there with three other chimpanzees who had also been raised in the Gardner's home. Loulis acquired knowledge of 51 signs from Washoe and the other chimpanzees around her. The human observers restricted their signing to the chimpanzees when Loulis was present in order to see what she learned from the chimpanzees alone. The restriction on human signing stopped after Loulis was about five years old because it was considered to be a deprivation to her and the other chimpanzees.

Not only did the researchers want to gain knowledge about learning and language in chimpanzees, they also wanted to share this knowledge with the general public.

> Through programs offered by the university and this institute, many graduate and undergraduate students conduct observational and other non-invasive studies of the chimpanzees' language use and other behaviour. Volunteer docents conduct public education sessions in on the signing chimpanzees and issues relevant to the species in general.[50]

This shows that the benefits of this research not only extended to the humans involved in conducting the research, it reached beyond them to the many humans involved in volunteering and public education. The wide reach of knowledge gained about chimpanzees ensured that pleasure was gained by many humans, but the question as to how this research affected chimpanzees, not only Washoe, but the many chimpanzees involved in the research center and chimpanzees in general remains to be examined.

Although Washoe was sent to live at the Central Washington University some of her peers were not so lucky: one chimpanzee was sent to live at a wildlife rehabilitation center, and was the sole chimpanzee on the premises; others were sent to biomedical research facilities, where hardly any attention, if any was given to their ASL abilities.

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[49] *The Human Use of Animals: Case Studies in Ethical Choice*, p 141.
[50] *The Human Use of Animals: Case Studies in Ethical Choice,* pg 142.

This case is not as easy to judge by utilitarian standards as the former case of the head injuries because no obvious physical pain was inflicted upon the animals involved, and all the chimpanzees involved must be taken into account on the utilitarian grounds of impartiality. When calculating the case of Washoe using the intensity of the pain or pleasure of those involved, it is not easy to assess. Were the chimpanzees suffering because they were raised in captivity? It appears that although they were not raised in their natural environments, they were well cared for by the researchers, and in fact, since they did not know any other type of life, life in the research facility may have suited them just fine. There may have been some unpleasantness associated with being raised in unnatural settings, but it appears to have been minimal. Any pain that would have been inflicted upon the chimpanzees during this research may have been caused by the psychological distress they may have experienced in being separated from the Gardners, and being sent to live in a research facility for the first time. Distress also likely occurred when the other chimpanzees who were not as fortunate as Washoe were transferred to the biomedical research facilities or the wildlife sanctuary. This is not taking into account the experiences they would have had at those facilities, rather it can simply account for the impact from the ASL research. It is quite possible that after being in an environment that fostered their language abilities, moving to any other environment would be denying them this pleasure of language and communication, which is of a higher pleasure quality. It is hard to assess whether chimpanzees would be gaining greater pleasure of a higher quality, in the sense that Mill discusses, after being taught ASL, although it is a distinct possibility. That also brings into question whether or not in fostering their language abilities, the researchers actually bestowed a higher quality of pleasure upon the

chimpanzees than they otherwise would have known in their natural environment. Perhaps they simply replaced the chimpanzees natural language with a human one that neither brought increased pleasure, nor pain.

The intensity of human pleasures gained by this research is easier to assess than those of the animals. The scientists probably gained much knowledge and pleasure from observing these chimpanzees acquire language skills, much like the pleasure parents get from watching their own children learn to use language. The Gardners may have experienced some sadness on parting with their various foster chimpanzees, but this pain was likely minimal as they knew they would be well cared for in the research facility. Upon judging the intensity of pleasures versus pains experienced in this research project for all sentient creatures involved, it appears that the balance is on the pleasure side.

When judging the duration of pleasures and pains experienced in the Washoe case, it seems to be easier than judging the intensity of pain/pleasure experienced. The humans involved, including those students who observed the chimpanzees, as well as the general public and the researchers, probably gained pleasure for a brief amount of time when they observed the chimpanzees interacting. They also may have gained some long term intellectual pleasure from the knowledge they gained by this type of observation. The pleasure or the pain experienced while living in captivity that the chimpanzees would have had, presumably would have lasted the entire duration. Again, it is unclear whether they would have experienced more pleasure in their natural environment, or if they got along just fine in captivity, perhaps even experiencing a higher quality of pleasure because of their language acquisition. It is likely that each time they were transferred to a new facility, the chimpanzees would have experienced a brief duration of distress. These

pleasures for chimpanzees could be extended to other chimpanzees in the future who are treated better because of the human knowledge gained about the intellectual capacities of chimpanzees found in this research. Perhaps research chimpanzees, in the future, will be less likely to be subjected to painful experiments or research because their high intellectual capacity will be acknowledged. This knowledge may contribute to the preservation of the chimpanzees as a species. Humans may want to preserve this endangered species because they understand them better, and can empathize with such an intelligent species. The pleasure brought to chimpanzees in general due to this research and the public education it fostered could be considered as meriting value as future pleasure for chimpanzees and humans, although the certainty of this is hard to assess.

The future benefits of this research are tough to gauge, but it is likely to provoke more pleasure than pain for humans and chimpanzees. The presence of pain or pleasure for the chimpanzees in this research is hard to judge as to its intensity. It is difficult to know whether or not the chimpanzees are likely to experience more pain or pleasure in their lifetime in this type of research than in their natural habitat. It is more likely that they would experience some psychological distress at certain points of the research, such as when they are transferred to unfamiliar facilities, but they are likely spared some of the physical pains they may endure in the wild, as they would there have to fight for survival. It is more sure that the humans affected by this research will experience more pleasure, rather than pain.

In trying to gauge the remoteness/propinquity of the pain and pleasure experienced by all those involved, it appears as if the chance of pleasure is likely better than the chance of pain. It is most likely, keeping in mind that intellectual pursuits are of

a higher quality of pleasure, that this experience would yield pleasurable results for the humans who have undertaken this study, with the goal of learning about language acquisition in chimpanzees, because any outcome will contribute to their knowledge. The chances of the chimpanzees experiencing pain decrease with the more care that humans give them, and by how organized the research is to facilitate the greatest care possible.

In this case, it seems that on utilitarian grounds, the research using chimpanzees is justifiable. It does appear that the balance of pleasure outweighs the balance of pain, which may have been experienced by the chimpanzees in this research. If there was evidence to suggest that the chimpanzees suffered some great psychological distress by this research, it would likely change the judgment, since there is no great pleasure gained by this research other than the pleasure gained through various intellectual pursuits. It may also be the case that the chimpanzees experienced a higher quality of pleasure by acquiring ASL skills, but this cannot be known for certain. In the third case study that will be examined, there will not be as many difficulties in determining whether or not utilitarianism justifies the research undertaken.

The final case of animal research that will be inspected using utilitarianism is the research conducted by Jane Goodall in Gombe, which began in 1960 and lasted thirty years.[51] The goal of this research was to observe chimpanzee behaviour without interfering with the life of the chimpanzees, in hopes of learning more about chimpanzees, their place in nature, and to understand aspects of human behaviour and

[51] *Through a Window: My Thirty Years with the Chimpanzees of Gombe.* Jane Goodall; Hougton Mifflin Company; Boston, 1990.

their place in nature.[52] The method by which this research was undertaken was, at first done by simply watching the chimpanzees through binoculars, from a vantage point, in order to piece together their daily lives.[53] As the years progressed, researchers would follow the chimpanzees more closely throughout the day to observe, record and interpret their behaviour.[54] The researchers at Gombe established the Gombe Stream Research Centre where Goodall and others laboured meticulously for thirty years, pooling their knowledge in order to see more clearly into the minds of chimpanzees. As their research progressed, they brought in more and more people from various disciplines, such as anthropology, ethnology, and psychology, from the United States and Europe. They also began to study baboons in the area as well.[55] Weekly seminars were conducted in order to discuss findings, and to plan better ways to collect information from the various studies; in sharing data, they could understand the complex social organisation of the chimpanzees and document their life histories as much as possible. The researchers also trained local Tanzanians as field staff.[56] All possible precautions were undertaken to prevent the baboons, who enjoyed human food, from stealing any, and to minimize the researchers impact on the animals.[57]

This case is easy to justify on utilitarian grounds for several reasons. The chimpanzees and baboons being observed were impacted very little throughout the study, and aside from some friendly relationships that developed between the humans and the chimpanzees, their lives were basically unchanged. The chimpanzees were not subjected

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[52] *Through a Window: My Thirty Years with the Chimpanzees of Gombe*, p 10.
[53] *Through a Window: My Thirty Years with the Chimpanzees of Gombe*, p 5-6.
[54] *Through a Window: My Thirty Years with the Chimpanzees of Gombe*, p 11.
[55] *Through a Window: My Thirty Years with the Chimpanzees of Gombe*, p 24.
[56] *Through a Window: My Thirty Years with the Chimpanzees of Gombe*, p 25.
[57] *Through a Window: My Thirty Years with the Chimpanzees of Gombe*, p 28.

to any experimental pain, as in the first case of the baboon head injuries, nor were they subjected to living in unnatural environments, as in the case of Washoe and her fellow chimpanzees.

The research at Gombe broke barriers regarding how chimpanzees and other animals are viewed by the scientific community: before the study it was not permissible in ethological circles to discuss an animals' "mind" or personality. Goodall naively named the chimpanzees and discussed their behaviour in terms of motive and purpose, contributing to the change in view of the scientific community.[58] The knowledge gained from the research also contributed to the preservation of the environment at Gombe so that further development did not endanger the chimpanzees of the area. The chimpanzees and other animals of Gombe benefited from the research in that their habitat would not have likely been preserved otherwise. Chimpanzees and other animals around the world also benefited from this research because it promoted awareness of similarities between humans and animals, which invokes human empathy toward them and perhaps shields them from some of the more nasty things that humans might be inclined towards doing to them.

The humans involved in this study felt much pleasure from the vast amount of knowledge that was gained through the research at Gombe. Researchers, such as Goodall, would give and continue to give public educational talks about the animals studied at Gombe in order to share their knowledge with the rest of the world. Books marketed to a public audience have also been published about the research, leading to further pleasures for humans who read them.

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[58] *Through a Window: My Thirty Years with the Chimpanzees of Gombe*, p 14.

There was only one accidental death of a researcher at Gombe which would have to weigh on the pain side of the utilitarian evaluation; overall it seems clear that the researchers derived great pleasure from simply following the chimpanzees through the jungle. Due to the fact that there was very little pain and a vast amount of pleasure for many people and animals, it is clear that the research conducted at Gombe is acceptable on utilitarian grounds.

Summary

Throughout this chapter the principle of utility has been explored and applied to animal research. Utilitarianism can be used to justify certain types of animal research, while it serves to condemn other types of research. It appears that if utilitarianism is to be used to judge animal research, then it must look at various types of research on a case by case basis in order to judge its merit. Human interests should not override animals' interests in justifying animal research upon utilitarian grounds because the basis for judgement is pleasure and pain, and animals appear to experience pleasure and pain in ways similar to humans. Although we cannot be certain of the intensity or type of pain and pleasure experienced by various animals, much like we cannot fully understand another person's experience of pain and pleasure, we can assume that they do have similar types of experiences. It may be difficult to judge the pain and pleasure experienced by various animals, but by accepting sentience as the ground for judgement for utilitarianism, like Mill and Bentham had done, and by looking at the current standards of practice in animal research where behaviours are viewed as signifiers of distress, utilitarian calculations can be made in the interests of humans and animals.

Chapter 3: Mahayana Buddhist Ethics and Animal Research

Mahayana Buddhist ethics will be explored in this chapter. The chapter will begin with a basic outline of the nature of Buddhist ethics, including an explanation of the soteriological goal of Buddhism, the realization of *nirvana*. The second section will be devoted to an explication of Mahayana ethics and the ideal of the *bodhisattva*. This section will explore some of the differences between Mahayana and Theravada Buddhism in terms of their application of their ethical systems. The third section of this chapter will look specifically at how animals fit into the Mahayana ethical system, and what ethical consideration they ought to be granted as living beings. The final section will apply the Mahayana ethical principles to the three case studies as presented in the former chapters.

3.1 The Nature of Buddhist Ethics

Discussions about Buddhist ethics must remain in the context of the Buddhist goal, the attainment of *nirvana*, because moral actions undertaken in Buddhism are directed towards this goal. The goal of Buddhism is to escape from the cycle of birth-death, which is *samsara,* the realm of suffering. All life is suffering according to the Buddha, and our goal in life should be to try and escape this suffering by following the teachings of the Buddha. "For Buddhists, all speculation is subject to one practical principle: it is valuable only if it can directly help a person to remove the 'arrow of

suffering' and find the way to *nirvana*."[1] Moral action is a means towards the goal of reaching *nirvana*, it cannot be examined without taking that goal into account.

There are four Noble Truths in Buddhism. They are articulated as 1) suffering exists, 2) how suffering arises from craving, 3) how suffering ceases due to the cessation of craving, and 4) there is a path out of suffering. Suffering is caused by craving which leads to attachment which prevents one from reaching *nirvana*.[2] Beings crave because they do not understand things as they really are; "Sentient beings are said to be afflicted by ignorance. They are blind to the reality of the impermanence of entities."[3] The realization of the impermanence of all phenomena is important to the alleviation of suffering and the attainment of *nirvana*. When one realizes that things are impermanent, it will help rid one of suffering, as one will cease the craving and attachment that causes this suffering. Craving and attachment lead to suffering because "When the objects of craving and attachment change in a disagreeable fashion, fall out of one's possession, or pass away, to a greater or lesser extent (...) one is disappointed, dissatisfied – [and then] one suffers."[4] We suffer because we crave certain things, such as material objects, the regard of other beings, and even our own existence, all of which will change or pass away and this causes us to crave other things, which will also change and pass away, and so on; ultimately this pursuit can never satisfy us. We must learn to see things as they really are, empty of an inherent or permanent existence, in order to find the path out of suffering.

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[1] *Eastern Religions.* "Buddhism" by: Malcolm David Eckel. General editor: Michael D. Coogan. Ducan Baird Publishers Ltd.; London, 2005. p 164.
[2] "Knowledge and Liberation: Philosophical Ruminations on a Buddhist Conundrum" by: David Burton. *Philosophy East and West.* Vol 52, no. 3; University of Hawaii Press, 2002. p 326.
[3] "Knowledge and Liberation: Philosophical Ruminations on a Buddhist Conundrum", p 327.
[4] "Knowledge and Liberation: Philosophical Ruminations on a Buddhist Conundrum", p 327.

Buddhism proposes a path out of suffering; it is the Noble Eightfold Path which lays down the guidelines for attaining enlightenment and escaping *samsara*. There are three branches found in the Noble Eightfold Path: the first one, abstaining from harmful action concerns *sila*, or moral conduct. "This *sila* denotes the sphere of moral excellence and may be translated by a range of more or less interchangeable English words such as 'morality', 'virtue', 'ethics', and 'good conduct' as the context demands."[5] *Sila* embraces concepts such as compassion (*karuna*), generosity, courage, etc.[6] The other two fundamental prerequisites are a disciplined mind (*samadhi* or mental concentration) and a proper understanding of the world (*prajna*- the Sanskrit for wisdom).[7] Although the second two do not directly involve *sila*, they do shape the conduct of a person, and indirectly lead them to moral actions. Craving causes suffering because the objects of desire are impermanent, thus one must cultivate correct knowledge of the nature of things as impermanent in order to begin to free oneself from craving.[8] "Because anger and desire arise form delusion, the most important of the Three Treasures is the Dharma and thus the cultivation of wisdom."[9] The cultivation of wisdom is central to the practice of Buddhism, and thus it may be the most important of the three branches of the Noble Eightfold Path.

Damien Keown connects the three-fold system of *sila*, *samadhi*, and *prajna* to the Noble Eightfold Path as follows: 1. Right Views, and 2. Right Resolve are instances of *prajna*; 3. Right Speech, 4. Right Action, and 5. Right Livelihood are subsumed under

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[5] *The Nature of Buddhist Ethics.* by: Damien Keown. Palgrove; New York, 2001. p 19.
[6] *The Nature of Buddhist Ethics,* p 19.
[7] *Eastern Religions*, p 165 – note that *panna* is the Pali translation for wisdom used by Keown.
[8] "Knowledge and Liberation: Philosophical Ruminations on a Buddhist Conundrum", p 326.
[9] *The Heart Sutra: The Womb of Buddhas.* Translation and commentary by: Red Pine. Shoemaker and Hoard; Washington, D.C., 2004. p 132.

sila; and finally 6. Right Effort, 7. Right Mindfulness, and 8. Right Meditation are part of s*amadhi*.[10] The Buddha provided a systematic exposition of normative ethical principles in his teachings, known as the *Dhamma, within* the framework of the Path/Way (*magga*), specifically the Noble Eightfold Path.[11] The purpose of the Noble Eightfold Path is to aid in the transition from *samsara* to *nirvana*: following the path alleviates the suffering of the moral agent, as well as of those whom she or he helps. By practicing the path, "The Buddhist seeks to eliminate suffering by cutting off craving (and the resulting attachment) in all its manifold forms."[12] The Buddhist practitioner can eliminate suffering by the cultivation of moral and intellectual virtue. "The Eightfold Path is primarily something which is participated in, and by participating in the Eightfold Path one participates in those values, excellences or perfections which are constitutive of enlightenment, namely morality (*sila*) and insightful knowledge (*panna*- the Pali word for wisdom)."[13] By participating in the Eightfold Path the Buddhist practitioner advances toward *nirvana*.

Ethics can be viewed as an instrument towards knowledge and then *nirvana*.

> By concentrating on *sila* one becomes a Streamwinner (*sotapanna*) or a Once-Returner (*sakadagami*), and by concentrating on *sila* and *samadhi* a Non-Returner (*anagami*). Only by practicing all three perfectly does one become a Perfected One (*arahant*).[14]

By practicing s*ila* alone without the other two branches, one will not attain *nirvana*, but one is rewarded by being reborn in the heaven realm, according to at least three major Buddhist texts, *The Treasury of Metaphysics, The Lamp of Metaphysics* and *The*

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[10] *The Nature of Buddhist Ethics,* p 35-38.
[11] *The Nature of Buddhist Ethics,* p 2.
[12] "Knowledge and Liberation: Philosophical Ruminations on a Buddhist Conundrum", p 326.
[13] *The Nature of Buddhist Ethics,* p 107 – Sanskrit translation is *prajna*.
[14] *The Nature of Buddhist Ethics,* p 46.

Compendium of Law.[15] In order to attain enlightenment, Buddhists must overcome the barriers of spiritual growth, and this cannot be done by practicing *sila* alone.

> Buddhists recognize three barriers (*avarana*) to spiritual growth: walls of *karma*, which include all limiting circumstances; walls of passion, which include anger and desire; and walls of knowledge, which include all forms of delusion, namely, the belief that something exists when it does not, or that something does not exist when it does.[16]

Attaining knowledge of how things really are is as important as practicing morality in order to gain enlightenment. Possession of correct knowledge will also help lead to the practice of morality. Undue emphasis on *sila* or *panna*[17] will lead to fixation and imbalance without progress toward the goal, and too much emphasis on *sila* will lead **to** clinging to rituals and rules.[18] When one clings to anything it becomes an obstacle for enlightenment because clinging, grasping or craving is the root cause of suffering, therefore clinging to Buddhist ritual can become a cause of suffering and counterproductive to obtaining enlightenment.

Buddhist wisdom, an important part in achieving enlightenment, can also help one to develop *sila*. It is important for any discussion on Buddhist ethics to highlight some of the main doctrines held by Buddhists, including the dependent origination theory and the no-self doctrine. These two doctrines are fundamental to understanding how Buddhist compassion towards all other beings is cultivated.

The theory of dependent origination states that all phenomena are interdependent on other phenomena for existence, in other words nothing possesses an independent essence, and nothing is permanent. Things without a permanent essence have no self.

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[15] *The Nature of Buddhist Ethics,* p 45.
[16] *The Heart Sutra: The Womb of Buddhas,* p 133.
[17] Pali for wisdom, Sanskrit translation is *prajna.*
[18] *The Nature of Buddhist Ethics,* p 47.

The world is seen as a complex set of transient mental and physical events.[19] "As the Buddhist doctrine of Dependent Origination emphasizes, everything arises and exists in relation to everything else. In other words, as the Mahayanists say, everything interpenetrates everything else."[20] All events are effects of former causes, nothing possesses independent status. All particular phenomena are related to all other phenomenon, which make up whole systems of inter-dependent phenomena. "This is thought to be the way things really are. Buddhism can be thus viewed as a form of process philosophy, which depicts the universe in terms of becoming and transformation rather than stasis."[21] All things are in constant flux, nothing is permanent, nothing stays the same. "All phenomena are subject to the law of impermanence."[22] This is an important consideration for morality because not only is this true of non-living phenomena, it is also true for living beings, including persons. "What the doctrine of interdependence emphasizes is, from the fact that the rest of the universe is responsible for me, it follows that I too am responsible for the rest of the universe."[23] Each person is only a part of the whole, which affects their being, and that they in turn can have an effect on the state of the whole. "It is from the above considerations that an attitude of deepest love towards other beings and nature, which the Buddha advocates, is derived."[24] Buddhadasa states that "Dependent Origination is in the middle between the ideas of having a self and the total lack of self."[25] Understanding the theory of dependent origination means to understand that because there is "this", there is "that". Every thing's

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[19] "Knowledge and Liberation: Philosophical Ruminations on a Buddhist Conundrum", p 326.
[20] *Fundamentals of Buddhist Ethics.* by: Gunapala Dharmasiri; Golden Leaves; U.S.A., 1989. p 9.
[21] "Knowledge and Liberation: Philosophical Ruminations on a Buddhist Conundrum", p 326.
[22] "Knowledge and Liberation: Philosophical Ruminations on a Buddhist Conundrum", p 326.
[23] *Fundamentals of Buddhist Ethics*, p 18.
[24] *Fundamentals of Buddhist Ethics*, p 19.
[25] *The Heart Sutra: The Womb of Buddhas,* p 113.

existence is contingent on the existence of other things; nothing can be said to exist in and of itself; no thing has its own eternal essence. This understanding helps one realize the emptiness of all phenomena.

In Buddhism, the existence of a "self" is denied. It is seen as an empty concept similar to all other phenomena and dependent on various features. A person is basically made up of five factors: 1)form, 2)feeling, 3)perception/cognition, 4)disposition, and 5)consciousness, all of which are always in flux. These physical and mental events constitute a person and always change; preceding events give way to succeeding events in a sequence of events. Through this unbroken continuum of events a personal identity is traced.[26] *Karma* is generated by this continuum and prescribes future states of events. "Though some assume that the doctrine of *karma* is a metaphysical doctrine, it is actually a psychological principle or a law based on the law of causation as applied to a series of mental events."[27] These events make up a person's *karmic* continuum, which remains within the cycle of *samsara* until the person's cultivation of moral and intellectual virtues frees them. According to the Theravada tradition, we have all been cycling in *samsara* for an immeasurable amount of time. Essentially all living beings are constituted by a *karmic* continuum, and within this continuum there is a constant flux of the five attributes, for there is no foundational "self" that holds them together. Realizing that there is no absolute self at the center of one's *karmic* continuum can help to cultivate compassion towards all other beings, as there is no longer a "self" to place above or separate from others.

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[26] *Fundamentals of Buddhist Ethics*, p 12.
[27] *Fundamentals of Buddhist Ethics*, p 13.

The fundamental inspiration for moral life is the concern for others; moral actions ought not to have ulterior motives, otherwise they would lack any karmic benefit.[28] Love and care for others cannot be chosen or adopted, as you cannot choose an emotion; they must be slowly cultivated by an emotional realignment. This takes place through the simultaneous practice of wisdom and moral cultivation. "As the claims of self lower on one side of the scale so fraternal concern will rise on the other."[29] Love and compassion go hand in hand with the liberation of the mind and the realization of the no-self doctrine of Buddhism.

Buddhist ethics are at the core of the principle of moral retribution, *karma*. *Karma* is the force that governs the process of death and rebirth.[30] "A person should abstain from harmful actions because they will lead to punishment in a future life and thus make it doubly difficult to escape the cycle of death and rebirth."[31] The performance of bad or harmful actions traps a person in *samsara*, or the cycle of birth-death; it is only by abstaining from harmful actions that one can reach *nirvana*. According to Dharmasiri, *karma* and rebirth are not metaphysical concepts, they are experientially verifiable concepts.[32] "The major purport of karma is to explain that one makes oneself."[33] That is to say one can affect their future, as a combination of the five aggregates, by their karmic actions.

Enlightenment can only be achieved by purifying of defilements (*klesa*) in the personal continuum (*santana)* that makes up a person, according to the Theravadin

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[28] *The Nature of Buddhist Ethics,* p 74.
[29] *The Nature of Buddhist Ethics*, p 75.
[30] *Eastern Religions*, p 165.
[31] *Eastern Religions*, p 165.
[32] *Fundamentals of Buddhist Ethics*, p 35.
[33] *Fundamentals of Buddhist Ethics*, p 35.

teaching, the *Abhidharma*.[34] "The soteriological purpose of the *dharma*-theory is to identify and facilitate the elimination of those factors which impede enlightenment, namely the defilements (*klesa*)."[35] Good qualities can bring about purification, and bad qualities oppose it. Among the many moral dictates of the Buddha, the most important set is the five precepts. To be successful in morality Buddhist practitioners must observe the five precepts, which are the compendium of Buddhist virtue. Perfect observance of these precepts will contribute to success in morality.[36] "The simplest compendium of the Buddhist morality is the five precepts: 1) Do not Kill, 2) Do not steal, 3) Do not commit adultery, 4) Do not tell a lie, 5) Do not take intoxicating liquors."[37] Defiling elements, such as these actions, pollute oneself *qua santana,* and then the whole stream that makes up a person becomes disquieted and unstable, whereas the goal is to bring *santana* into a state of equilibrium.[38] The five benefits of *sila*, besides enlightenment, as laid out by the Buddha; are:

1) A large fortune produced through diligence
2) A good reputation
3) Entering confident and unconfused into any assembly
4) An unconfused death
5) A happy rebirth in heaven[39]

The primary effect of *sila* is deontic, through it one participates in the *nirvanic* values of good and right.[40]

As with the cultivation of wisdom and morality, the middle way must be sought in morality. Keown states that we must use both emotion and reason to come to a middle

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[34] *The Nature of Buddhist Ethics,* p 59.
[35] *The Nature of Buddhist Ethics*, p 59.
[36] *The Ethics of Buddhism*. by: S. Tachibana. Clarendon Press; University of Oxford, 1926. p 63.
[37] *The Ethics of Buddhism*, p 57-58.
[38] *The Nature of Buddhist Ethics*, p 59.
[39] *The Nature of Buddhist Ethics*, p 125.
[40] *The Nature of Buddhist Ethics*, p 125.

ground and Misra agrees, stating: "Buddha believed that virtue lies in the avoidance of extremes."[41] Moral appreciation is cultivated by caring about others, as well as the effects one's actions will have upon those others. Moral action in Buddhism is a form of love towards other beings. "The Buddha's moral concern is found in his sympathy (*anukampa*) for all beings."[42] The Buddha's morality was not found once he reached enlightenment, it was a condition of his enlightenment; his morality preceded it and was motivated by it.[43] "From the recognition of suffering – as an empirical or a psychological fact – Buddha proceeds to prescribe the way through the observance of which it could be removed; it is necessarily an ethical procedure."[44] This holds for everyone, as we all possess Buddha-nature, according to the Mahayana tradition, and so morality must thus proceed enlightenment. Morality is not an end-in-itself: it is not a means towards enlightenment that is to be abandoned once enlightenment is attained, for it is part of enlightenment.[45]

> The attainment of nirvana-in-this-life marks the fulfillment of human potential, not its transcendence. If it *were* in some sense transcendent then the Buddha would have passed beyond the possibility of ethical predication and become a moral zero.[46]

The Buddha did not become a moral zero, as he still continued to refer to himself in terms of ethical goodness "after" enlightenment. The Buddha did not transcend goodness, rather he fulfilled it, and moved beyond the possibility of evil.[47] He was inspired, as all

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[41] *Development of Buddhist Ethics*. by: G.S.P. Misra. Munshiram Manoharlal Publishers Put. Ltd.; New Dehli, 1984. p 74.
[42] *The Nature of Buddhist Ethics*, p 73.
[43] *The Nature of Buddhist Ethics*, p 73.
[44] *Development of Buddhist Ethics*, p 74.
[45] *The Nature of Buddhist Ethics*, p 75.
[46] *The Nature of Buddhist Ethics*, p 113.
[47] *The Nature of Buddhist Ethics*, p 113.

ethical motivations in Buddhism are supposed to be, by the disposition of benevolence towards all beings.

The central moral virtues in Buddhism are love, compassion, sympathetic joy and equanimity.[48] The primary function of love is to displace hostility towards others; the primary function of compassion is the devotion to remove suffering; the function of sympathetic joy is to bring about non-enviousness; and the function of equanimity is to bring about even mindedness or equal consideration for all sentient beings.[49]

3.2 Mahayana Ethics and the *Bodhisattva*

Ethics in the Mahayana have been developed in a number of different directions, and have the potential to appear quite differently, depending on the view adopted.[50] This section will explicate some of the main ideas in Mahayana ethics that are common to most interpretations. According to Gyonen, Mahayana ethics have a threefold nature; they work towards: 1) the prevention of all evil, 2) the cultivation of all good, and 3) the salvation of all beings.[51] Developing one's own moral behaviour in Mahayana ethics begins with "...an understanding that one's own body suffers when others suffer, [and then one] can develop the wish to become enlightened so as to eliminate their suffering as a dimension of one's own suffering."[52] This relates to the interdependence of all things: when one gains the knowledge that they suffer when other beings suffer, then it will help them to develop compassion for all other beings as based on our mutual interrelationality.

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[48] *Fundamentals of Buddhist Ethics*, p 42.
[49] *Fundamentals of Buddhist Ethics*, p 44-48.
[50] *The Nature of Buddhist Ethics,* p 129.
[51] "Searching for a Mahayana Social Ethic". by: David W. Chappell; *Journal of Religious Ethics*, 2001. p 351.
[52] Searching for a Mahayana Social Ethic, p 356.

This relates to the concept of *ci-bei*; *ci* being the recognition of affinity with others, and *bei* being helpful actions to relieve suffering.

> Accordingly, compassion as *ci-bei* first involves an enlargement of our self-identity to include a sense of connectedness with the fate of others...The foundational concept of *ci-bei* (compassion) involves both awareness and action: awareness of affinity with others and concrete actions for relieving suffering.[53]

The development of this type of compassion is the foundation of Mahayana ethics. "Perfection and compassion go together; to be enlightened means to be compassionate."[54] The emphasis on compassion is one of the main differences that distinguishes Mahayana Buddhism from Theravada Buddhism.

Mahayana Buddhism claims to be the original teaching of the Buddha. It does not discard the teachings of Theravada Buddhism that help beings free themselves from egoity, attachment, malice, delusion et cetera, that help beings attain the state of Arhathood, one who is enlightened.[55] There are four ways that Mahayana Buddhism is claimed, by some, to be superior to Theravada Buddhism, as mentioned in the *Mahayanasamgraha*: it is superior in its classifications, common and separate rules, breadth, and depth. It is seen as superior in its classifications because it allows for temperance, the cultivation of virtue, and altruism. Mahayana is superior in rules because it possesses serious and minor offences.[56] It allows for the committing of minor offences as long as they are a benefit to others, and are performed from an irreproachable motive.[57] Mahayana is considered superior in breadth because it possesses multiple and

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[53] Searching for a Mahayana Social Ethic, p 369.
[54] *Development of Buddhist Ethics*, p 128.
[55] *Development of Buddhist Ethics*, p 123.
[56] *The Nature of Buddhist Ethics*, p 136-137.
[57] *The Nature of Buddhist Ethics*, p 149.

extensive rules, as well as provides the possibility of gaining immense merit; it has the disposition to procure the welfare and the happiness of all beings, and establish supreme and perfect enlightenment. Finally it is considered superior in depth because of the use of skilful means.[58]

The innovation of skilful means may be the most important notion in Mahayana Buddhism.

> Stated briefly in its starkest form, the doctrine authorises a *bodhisattva* to commit the Ten Bad Paths of Action (*dasa-akusala-karmapatha*), to gain immense merit thereby, and rapidly to attain supreme and perfect enlightenment. Furthermore a *bodhisattva* may perform acts of deception and inflict suffering on beings if it leads them into discipline (*vinaya*).[59]

The transgression of moral norms is linked to the possession of perfect insight in the *Compendium of Conduct*, meaning that not just anyone is allowed to transgress moral norms, only those possessing perfect insight. This is similar to the *Sutra of Skilful Means* where it states that "...it is knowledge which absolves one from blame, yet at other times the scales tip towards compassion, and acts which are motivated by attachment to others are said to be blameless."[60] This means that only those possessing the six perfections of a *bodhisattva* (giving, morality, patience, zeal, mindfulness, and wisdom) may commit these offences.[61] Two conditions must be satisfied when offences of this type are committed: 1) the action must produce greater good for all beings affected by it; and 2) the action must be performed on the basis of perfect knowledge (*prajna*) or perfect compassion (*karuna*).[62]

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[58] *The Nature of Buddhist Ethics*, p 137.
[59] *The Nature of Buddhist Ethics*, p 150.
[60] *The Nature of Buddhist Ethics*, p 153.
[61] "Searching for a Mahayana Social Ethic", p 354.
[62] *The Nature of Buddhist Ethics*, p 154.

> In the case of perfect knowledge the rationale seems to be that from the point of view of ultimate truth there is no such thing as a rule or a being; and in the second case from the standpoint of relative truth the interests of others are all-important and must be furthered whatever the cost to oneself.[63]

When trying to resolve who is allowed to make moral transgressions, it should be remembered that there are two senses of skilful means or *upaya* in Mahayana Buddhism: the first is normative ethics, which is the cultivation of moral qualities as encompassed in the first five perfections; and the other is not of concern for the laity as it is an attribute of those who are perfect in ethics and insight, such as the *bodhisattva*.[64]

In Mahayana Buddhism the basic values are *prajna* and means, or *prajna* and compassion, rather than *panna* and morality as in Theravada Buddhism. With this change comes a new emphasis on moral virtue as other-regarding, rather than personal development or self control as the primary emphasis.[65] Compassion is central to Mahayana ethics, as it is the foundation of the six perfections of the bodhisattva. It is not limited to an inner attitude, rather compassion in Mahayana ethics is identified with practical action.[66] There are two types of compassion present in Mahayana ethics, the first being ordinary compassion, and the second is great compassion. Ordinary compassion is present pre-enlightenment, and is limited, wavering, lacking wisdom and the ability to save all beings.[67] Great compassion is found in *bodhisattvas* once they have attained enlightenment, and is described as: "A feeling of complete identity with others... evoked so that one's liberation is tendered incomplete and meaningless if all others are

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[63] *The Nature of Buddhist Ethics*, p 154.
[64] *The Nature of Buddhist Ethics*, p 157.
[65] *The Nature of Buddhist Ethics*, p 131.
[66] "Searching for a Mahayana Social Ethic", p 360.
[67] "Searching for a Mahayana Social Ethic", p 359.

not liberated."[68] It is boundless, never wavers. It has the ability to greatly save and help, and it is practiced with wisdom.[69] Only *bodhisattvas* possess this great compassion.

This notion of the *bodhisattva* is unique to Mahayana Buddhism.

> *Bodhisattvas* can be male or female, celibate or married. As long as they work toward enlightenment (*bodhi*) for themselves and liberation (*nirvana*) for others, they follow the *bodhisattva* path and are worthy of being call *bodhisattvas*.[70]

A *bodhisattva* puts his/her knowledge towards the service of all beings, helping them towards *nirvana*, rather than focusing solely on his/her own enlightenment.[71]

> [The *Bodhisattva's*] spiritual venture is not individualistic; rather, his concern is the attainment of Buddhahood to every being and he assiduously works for it. Mahayana is thus guided by the notion of *saivamukti* of 'liberation for every being' and is basically universalistic in temperament.[72]

A *Bodhisattva's* vow is to save all beings from suffering, which can be done through skilful means. There are a few ways of interpreting this: many interpret the *bodhisattva's* vow as stating that the *bodhisattva* will forgo reaching *nirvana* until all beings, that is, everyone has attained enlightenment. Other interpretations emphasize that due to the *bodhisattva's* understanding of the nature of being, they can be in *nirvana* and *samsara* simultaneously, which will be explained below. And finally there is the Upasaka Sutra interpretation examined by David W. Chappell in *Searching for a Mahayana Social Ethic*: "The phrase 'to save all beings' as used in the *Upasaka* implies being compassionate and helpful to any and all beings *whom one encounters* rather than being

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[68] *Development of Buddhist Ethics*, p 128.
[69] "Searching for a Mahayana Social Ethic", p 359.
[70] *The Heart Sutra: The Womb of Buddhas,* p 131.
[71] *The Nature of Buddhist Ethics*, p 133.
[72] *Development of Buddhist Ethics,* p 123.

responsible for everyone everywhere."[73] Regardless of the various interpretations, the *bodhisattva's* vow places the regard on helping other beings attain *nirvana*.

The concept of the *bodhisattva* is the ultimate fruition of Mahayana ethics, according to Dharamsiri.[74] In Theravada Buddhism, there is only one *bodhisattva*, and that is the Buddha. Everyone else can only strive to be an *arahant*, or one who is perfected in wisdom. In Mahayana Buddhism, an *arahant* is not considered perfect, and all beings should strive for Buddhahood.[75] "The Buddha's and the *Bodhisattva's* i.e. the enlightened and saintly beings, too are an integral part of the phenomenal existence and from time to time, the social good and well-being of humanity is assured through them."[76] The *bodhisattva's* activities cannot be hampered by delusion as he/she must be able to direct their activities towards supreme enlightenment via the enlightenment of all beings. The *bodhisattva* must possess the Buddhist insight of the emptiness of all things. The *bodhisattva's* path ends with no birth and the realization that nothing enters existence in the first place.[77] The *bodhisattva* vows to liberate all beings from suffering. *The Heart Sutra* explains that the knowledge that the *bodhisattva* possesses once enlightened is a new understanding of the world: because nothing arises, nothing can cease, and because nothing ceases, nothing is impermanent, because nothing is impermanent, suffering cannot occur, and because suffering cannot occur all beings are freed from suffering, because all beings are freed, the bodhisattva has fulfilled their vow to liberate all beings.[78] Once the vow has been fulfilled, the *bodhisattva* is then liberated.

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[73] "Searching for a Mahayana Social Ethic", p 366.
[74] *Fundamentals of Buddhist Ethics*, p 88.
[75] *Fundamentals of Buddhist Ethics*, p 89.
[76] *Development of Buddhist Ethics*, p 102.
[77] *The Heart Sutra: The Womb of Buddhas,* p 129.
[78] *The Heart Sutra: The Womb of Buddhas,* p 129-130.

"Thus the liberation of all beings revolves around the liberation of the *bodhisattva* from the concept of being."[79] The *bodhisattva* reaches the point where neither attainment, nor non-attainment means anything. They have the knowledge of the emptiness of all things, which ends their craving, and thus liberates them. "Compassion can never be mastered without the view of emptiness; wisdom can never be brought to completion without the perfection of compassion."[80] Compassion and wisdom are interdependent, and the *bodhisattva* must cultivate both. "The wisdom of the *bodhisattva* is to see that others are not separate from ourselves; this wisdom enables the *bodhisattva* to ease their sufferings and to be joyous in their accomplishments."[81] From this it is easy to see how wisdom and compassion work together in Mahayana ethics. The *bodhisattva* possesses the correct knowledge that the "self" is not separate and distinct from other "selves" and can, therefore, cultivate love and compassion towards others.

A *bodhisattva* must possess both *prajna* and *upaya,* or awareness and beneficial expediency.[82] "For the Mahayana, *sila* is at one and the same time a source of purification and happiness for the practitioner and an example and benefit to others."[83] The *bodhisattva* is considered to have perfected both wisdom and morality.

> Also, one can say that the *bodhisattva* concept is the most logical Buddhist ideal which conforms to the principles expounded by the Buddha himself in the *Kalama Sutra*, where he says that no one should follow another, but everyone should try to attain one's own perfection without depending on another.[84]

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[79] *The Heart Sutra: The Womb of Buddhas,* p 130.
[80] *Introduction to the Middle Way: Chandrakirti's Madhymakavatara with Commentary by Jamgon Mipan.* Translated by the Padmakara Translation Group; Shambhala; Boston & London, 2004. p 4
[81] "Searching for a Mahayana Social Ethic", p 368.
[82] *The Nature of Buddhist Ethics,* p 133.
[83] *The Nature of Buddhist Ethics*, p 134.
[84] *Fundamentals of Buddhist Ethics*, p 89.

The *Arahant*, although not considered perfect in Mahayana Buddhism, is seen as a student of the Buddha who leaves *samsara* after death.[85]

> But the *bodhisattva* undergoes this suffering willingly in order to help others, and therefore he performs the unique feat of voluntarily coming back to *samsara* again and again, thus willingly postponing his final entering into *nirvana*.[86]

The *bodhisattva* will postpone entering *nirvana* until every last being has been enlightened. The *bodhisattva* does not fear staying in *samsara* because he/she has achieved the correct understanding of the nature of all things as empty. They are "Without the walls of the mind and thus without fear."[87] Because a *bodhisattva* is enlightened, the barrier between *samsara* and *nirvana* is no longer present in their conceptual framework; essentially they can see both perspectives at once. "Sorrow and pain are our subjective production and, so, the realization of the Absolute can be accomplished only when our subjectivity is transcended and not by mere formal renunciation of the world."[88] The *bodhisattva* can achieve this transcended state and can therefore dwell in *samsara* and *nirvana* at once. "The ideal state of nirvana is not to be found in any heaven apart from the human world but very much within it."[89] This concept is unique to Mahayana Buddhism.

3.3 Mahayana Buddhism and Animals

The purpose of this section is to explore the moral status of animals in Mahayana Buddhism. Unlike many ethical systems, Buddhist ethics are not anthropocentric, as they

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[85] *Fundamentals of Buddhist Ethics*, p 89.
[86] *Fundamentals of Buddhist Ethics*, p 89.
[87] *The Heart Sutra: The Womb of Buddhas,* pg 134.
[88] *Development of Buddhist Ethics*, p 124
[89] *Development of Buddhist Ethics*, p 124.

apply to all living beings. "It is important that Buddhism is much more than merely humanistic, because the Buddhist love embraces all types of beings."[90] Buddhism may be considered anti-humanistic because human beings are neither paramount nor privileged.[91] There are several reasons for Buddhist love and compassion to extend beyond humans, and thus to animals, and this section will attempt to explicate these.

The first reason that Buddhist ethics extend to all living beings, according to Dharamsiri, is because one must have reverence for all life, otherwise one risks alienating oneself from life.[92] It must be remembered that as described by the doctrine dependent origination, all life depends on all other phenomena in the world. To separate oneself out of the whole, or to only include those from one's own species, would not make moral sense as each being is important to the whole just like every other being. To exclude any living form from ethical considerations would not make sense in Buddhism.

> If one disrespects life that is manifested in any form, one deteriorates morally and spiritually because one becomes alienated from the most basic and intrinsic value of the world.[93]

One must not forget that through the doctrines of no-self and dependent origination, one can understand that there is no difference in status between humans, animals, or plants, for all life deserves moral consideration.

> As the Mahayana texts put it, it is not only men but all sentient beings down to the very lowest who are potential Buddhas, in that a Buddha-nature (*Buddha-bhava*) is present within them. If only for this reason, no one has a right to despise a fellow creature, since all are subject to the same laws of existence and have ultimately the same nature and the same potentialities... [94]

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[90] *Fundamentals of Buddhist Ethics*, p 19.
[91] *Fundamentals of Buddhist Ethics*, p 130.
[92] *Fundamentals of Buddhist Ethics*, p 21.
[93] *Fundamentals of Buddhist Ethics*, p 21.
[94] *Fundamentals of Buddhist Ethics*, p 63.

This passage mentions sentient beings, rather than all life. I would purpose that sentient beings deserve consideration in treatment slightly different from other forms of life because 1) they have the ability to suffer, and 2) they have the ability to follow the Path towards enlightenment, whereas plants or other life forms, such as bacteria or amoebas, do not. The Buddha believed that the daily life of animals contains a level of suffering that is hard for humans to conceive of. He tells a group of monks: "I could speak on in many a way about the realm of the animals, and yet not be able to express in words how dreadful the sufferings there (in the animal realm) are."[95] As sentient beings animals have the ability to suffer, and they may have the ability to seek enlightenment, as "Animals are seen as occupying a position just one step away in the ascent to our own human sphere."[96]

The *Cullavagga* holds that even animals who keep the five precepts will be reborn in heaven, showing that animals can have a positive effect on their *karmic* continuum.[97] "Allowing for the exaggerated anthropomorphisms of the *Jataka* stories, the emphatic lesson they teach us is that animals are in no way inferior to men and so we have absolutely no rights over and above them."[98] The Buddha did not consider animals to be lesser beings than humans, and held that they should be given equal consideration. He saw animals as honest beings not tangled in a foliage of treachery and deceit, different from humans who try to conceal their true nature or intentions.[99] Animals do not

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[95] *Buddhism and Animals: A Buddhist Vision of Humanity's Rightful Relationship with the Animal Kingdom*, . by: Dr. Tony Page. UKAVIS Publications; London, 1999. quoting "The Fool and the Wise Man" of the *Majjhima-Nikaya* p 64.
[96] *Buddhism and Animals: A Buddhist Vision of Humanity's Rightful Relationship with the Animal Kingdom* p 64.
[97] *The Nature of Buddhist Ethics*, pg 46.
[98] *Fundamentals of Buddhist Ethics*, pg 129.
[99] *Buddhism and Animals: A Buddhist Vision of Humanity's Rightful Relationship with the Animal Kingdom*, p 65.

dissemble, in other words, what you see is what you get.[100] The Buddha believed that "any suggestion that we should ignore the fate of the animals and concentrate on the cultivation of perfect, liberating wisdom just for ourselves was nothing less than an inspiration of the Devil (*Mara*)."[101] But why have humans always felt that they alone as a species should be granted moral status? According to Dharmasiri, "It is the anthropocentric pride that has made man feel that he is the owner of animals and plants, and it is this very pride that will gradually choke him and cause his end."[102] Humans are not meant to place themselves apart from animals, or the environment for that matter, as they are all a part of that environment and depend on it.

Taking into account that during the cycle of birth-death all humans were likely, at one time or another, incarnated as various animals, plants, and other life forms, there is a reason that humans should respect animals. We could also look at it from a non-Buddhist perspective, humans evolved from animals and are hardly distinguishable in their daily activities from them. "The only difference is that what the animal does in a simple way, man does in a much more complex manner."[103] For example, humans have houses and some animals have territories, both function in a similar manner. Other examples of human-animal similarity are those of self-sacrifice and hierarchy: Individuals will sacrifice themselves for the betterment of the group/family; and human societies have a hierarchical political structure similar to animals. Humans consider self-sacrifice to be altruistic, but in animals it is seen as a survival mechanism; and this then may have

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[100] *Buddhism and Animals: A Buddhist Vision of Humanity's Rightful Relationship with the Animal Kingdom*, p 91.
[101] *Buddhism and Animals: A Buddhist Vision of Humanity's Rightful Relationship with the Animal Kingdom*, p 68.
[102] *Fundamentals of Buddhist Ethics*, p 130.
[103] *Fundamentals of Buddhist Ethics*, p 130-131.

originated as survival mechanisms for living species. "The whole of morality is directed towards the preservation of a particular organization of species. Evolution wants to preserve species not individuals."[104] But it is because animals are susceptible to moral practices that the Buddha and other *bodhisattvas* will reincarnate in the animal realm in order to cultivate positive moral traits among them. "It is because they can respond in a positive manner that the Buddha and his *Bodhisattvas* take upon themselves the task of incarnating amongst, and mixing with, animals and other beings."[105] If morality is also a tool for survival, this also fits into the dependent origination theory in that individuals depend on the species or community for survival, and the species depends on individuals for survival. Moreover species depend on their environment to survive, and environments are shaped by the species they contain, which again fits into the theory of dependent origination. Not only should humans regard animals as being worthy of moral consideration, because they are connected to them through the theory of dependent origination, they should also treat them well because animals possess the same Buddha-nature as humans. "It is because (amongst other reasons) all beings, including animals, have the potential for Buddhahood within them that they should not be harmed or slighted."[106] Humans and animals are more similar than they are different, according to Buddhist thought.

Dharamsiri cites Robert Ardrey in stating that both animals and humans have three basic needs to fulfill: 1)identity, 2)stimulation, and 3) security.[107] "Human societies

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[104] *Fundamentals of Buddhist Ethics*, p 132.
[105] *Buddhism and Animals: A Buddhist Vision of Humanity's Rightful Relationship with the Animal Kingdom*, p 95.
[106] *Buddhism and Animals: A Buddhist Vision of Humanity's Rightful Relationship with the Animal Kingdom*, p 107.
[107] *Fundamentals of Buddhist Ethics*, p 131.

behave exactly like societies of rats, who are friendly towards members of their own community but mortal enemies to outside members of their own species."[108] The similarities between humans and animals are many, and therefore animals should be considered as having similar moral status as humans, but it is also due to these reasons that they have become subjects for research to further fulfill human needs, like curiosity, compassion, and survival.

3.4 Applying Mahayana Ethics to Case Studies in Animal Research

In considering Mahayana Ethics one may wonder if humans have the right to use animals in research at all. It would have to be answered that humans do not have a *right* to use any animals as means towards selfish ends, but some research may not be unethical and may be in accordance with Mahayana standards. It must be remembered that any research conducted should demonstrate love and compassion, not putting animals beneath human interests, as similar ethical considerations that apply to humans should apply to animals. In this section, Mahayana ethics will be applied to the three case studies formerly presented in chapter two in order to show that Buddhist ethics can be applied to animal research.

The case of "Head Injury Experiments on Primates at the University of Pennsylvania" will be the first case examined using Mahayana ethics.[109] Recall that this research involved subjecting baboons to extensive head injuries using machines that could generate up to two-thousand times the force of gravity. The baboons undergoing the experiments were sometimes awake during the research and were likely subjected to a

[108] *Fundamentals of Buddhist Ethics*, p 132.
[109] See section 2.3 for this case and references.

great deal of suffering. The research lacked a clear hypothesis to test, and the baboons were kept alive in a state of paralysis or coma for up to two-months after the head injury was inflicted.

This research clearly shows a lack of love and compassion towards the baboons who underwent the experiments. Mahayana ethics would certainly not condone this kind of treatment of animals. The first reason that this case can be considered as unethical is that the animals being used were not given the ethical consideration that would normally be bestowed upon humans subject to such an experiment. The fact that no one would condone such experiments to be conducted on humans demonstrates that these baboons were not given similar consideration to humans. In addition unnecessary suffering was inflicted upon them by not anesthetising them properly.

The second case that Mahayana ethics will be applied to is the case of Washoe the chimpanzee who learned American Sign Language.[110] This research could not have been conducted on humans, as it was trying to assess the language skills of chimpanzees specifically. Learning how chimpanzees can acquire language may have implications for human language studies, but it is clear that humans could not have been the subjects of this research. It is hard to assess whether or not Washoe was given and treated with an ethical status similar to that of a human being, but it appears that she may have at least, for parts of her life, been granted comparable ethical status. When the Gardners were raising her, it appears that she was cared for, and possibly loved as much as any human child. When she was moved to the research facility at the Institute for Primate Studies at the University of Oklahoma, she had to learn to live with other chimpanzees. Here she lived part of her life in a cage from which she could only venture out on a leash.

[110] See section 2.3 for summary of research and references.

Obviously humans are not treated this way, which could show that her ethical status may have degenerated when she was moved to the research facility. One could also argue that the leash and the cage were for safety reasons, her own and that of the other animals, and the humans with whom she interacted. This argument may not have much strength because she was subject to unnecessary confinement in order to further pursue research; her housing could have been made more appropriate. Researchers generally would not put a human in a cage simply for convenience and only let them out on a leash when they needed to be studied and assessed. When she was moved to a new housing facility that was more appropriate for chimpanzees with better living quarters and exercise areas, her moral standing may be have increased.

It appears that throughout her life, she was well-cared for and possibly loved by the researchers. Throughout the research it appears that Washoe was treated well, and she could have been seen as a symbol to promote compassion towards other members of her species. Although she was well-cared for, at times she was not in facilities (cages) that were appropriate for her species, and certainly not where one would house a human. She was clearly being used as a tool to learn from, and using animals as tools does not demonstrate moral treatment per se. One may argue that any research conducted that takes animals out of their environment and uses them as tools for the betterment of human knowledge is not granting them moral status similar to that of humans, who are not generally taken out of their home for research experiments without their consent.

According to Mahayana ethics, it is not right to place animals in a lower moral status as compared to humans. So this type of experiment may be considered unethical on these grounds. On the other hand, all of her needs appear to have been met, to the

fullest extent possible for an animal in captivity, and she likely did not suffer much by being a subject of this kind of research. Her life in the wild may have been shorter and harder than the life she had at the research facilities. She also symbolically served to promote awareness and compassion for her species, which may have inspired some humans to help preserve chimpanzee environments and lifestyles in the wild. But Mahayana ethics is not necessarily utilitarian, so although Washoe may have suffered a little for the greater good of her species, that does not necessarily stand up to a Buddhist evaluation. If Washoe could have chosen to live in research facilities and sacrifice some of her natural freedoms, then Mahayana Buddhism would condone this experiment on the grounds that Washoe herself was showing compassion to members of her species by promoting human awareness. It is uncertain if Washoe would have made this choice, or whether or not primates have "free-will" in the same sense that humans do.

The final evaluation of the research involving Washoe in this context seems unethical according to Mahayana Buddhist standards, simply because she was being used as an instrument for human knowledge. Using a member of any species, including humans, as a mere means-to-an-end shows a lack of compassion towards those individuals. Although great lengths may have been taken to ensure Washoe's comfort, and the fact the she was likely loved by the Gardners and other humans she encountered, it does not detract from the fact that she was used as an implement for knowledge. Therefore, this research is not morally sound according to Mahayana guidelines.

The final case that will be examined is Jane Goodall's research on the chimpanzees of Gombe. This research appears to be ethically viable according to Mahayana Buddhist standards for several reasons. Firstly, this research is ethically sound

because it appears that the researchers undertook this research out of a genuine love and concern for the chimpanzees of Gombe. The researchers wanted to study the social patterns of the chimpanzees in order to better understand the species. The social patterns of chimpanzees can help humans to understand their own species better, even though they were objectified to some degree during the research. The difference between the objectification of the chimpanzees of Gombe and other kinds of research involving animals is that the humans tried not to interfere with the natural lives of the chimpanzees. They simply observed them by following them around their natural environment, and interfered as little as possible. The researchers loved these chimpanzees in the same way that they would love humans that they might observe. This is demonstrated by a passage from Jane Goodall's book, *Through a Window: My Thirty Years with the Chimpanzees of Gombe,* where she discusses the death of one of the chimpanzees she had been observing for many years: "Although I had long known that the end was close, this did nothing to mitigate the grief that filled me as I stood looking down at Flo's remains. I had known her for eleven years and I had loved her."[111] The researchers developed relationships with the animals that they were observing and did not view them as mere objects. In fact, they seemed to view them as individual persons of a different species, equally deserving of moral consideration. This shows that the researchers displayed what the Buddhists would call benevolence and love towards the chimpanzees of their study.

The research, although it objectified the chimpanzees somewhat, served to bring humans closer to another species, and led to the development of compassion for this species and other primates. This can be demonstrated in the many lectures and events that Goodall and her colleagues have attended in promoting the preservation of the

[111] *Through a Window: My Thirty Years with the Chimpanzees of Gombe*, pg 31.

habitat and lifestyle of chimpanzees around the world. By sharing their observations, they have had a positive impact on the preservation of chimpanzee habitat. They have been able to conduct their research in a non-intrusive manner. Goodall and other researchers sacrificed their own safety and comfort to follow and observe the chimpanzees of Gombe for over thirty years, collecting data on their social behaviour and lifestyle. The findings were then used to promote awareness of and compassion towards chimpanzees who live in a dwindling natural environment. Goodall and others fight for the preservation of chimpanzees as a species. The self-sacrifice for the betterment of others exemplifies Buddhist love and compassion towards the chimpanzees. This research is thus morally praise-worthy according to Mahayana Buddhist standards.

Summary

This chapter has explored the main points of Mahayana ethics. Mahayana Buddhism is a complex and extensive systems with many various branches, and this chapter does not pretend to thoroughly explore all possible avenues of its ethics, for a comprehensive study of Mahayana ethics could take up an entire thesis on its own. The material presented is meant to give a general understanding of how Mahayana ethics work in order to be able to apply them to animal research, specifically the cases presented in the latter part of the chapter. The nature of Buddhist ethics has commonalities across the Theravada and Mahayana traditions, as was seen in the first section of this chapter, but the Mahayana understanding of compassion and the *bodhisattva* distinguishes it from the older traditions. This idea of compassion will be central in exploring how Mahayana ethics differ in application to utilitarianism. The connection between wisdom and morality is very important to Mahayana ethics, and must be remembered when one is

attempting to use this ethical system in a practical application. The impact of this connection and Mahayana compassion will be further explored in the next and final chapter, as we compare utilitarianism to Mahayana ethics in regard to animal research.

Chapter 4: Discussion and Comparison

This chapter will contain four important discussions. The first section will explain the importance of the comparison of utilitarianism and Buddhist ethics. The second section will examine the results of applying utilitarian and Buddhist ethics to the three case studies from the former chapters; it will use the case studies to explain the differences and similarities of each system. The third will look at some of the problems with applying utilitarianism and Buddhist ethics to animal research. This will include a discussion on sentience in animals and what it means to be sentient. Sentience will be approached from three perspectives: science, philosophy, and Buddhism. This section will attempt to offer a definition that is acceptable to all three. The final section of this chapter will discuss why animals deserve moral status according to utilitarianism and Buddhist ethics, and what this means to the future of animal research.

4.1 Utilitarianism, Buddhism and Animal Research

The ethical system of utilitarianism has been applied to animal research many times. It is considered to be a relevant system in assessing what can or cannot be done to animals during research, essentially because it is an ethical system built around the experiences pain and pleasure. It is one of the only ethical systems that can be successfully applied to animals because its criteria for the evaluation can be so applied. Other ethical systems rely on social contracts or an inferred duty towards others, whereas utilitarianism's goal based approach of maximizing pleasure and minimizing pain is an ethical system that can be applied across species boundaries.

Buddhist ethics has not been commonly applied to animal research because it is primarily seen as an avenue towards spiritual achievement to those who follow

Buddhism. It is interesting to take these ethics and apply them to a practical problem because of their reliance on compassion. It is possible and necessary for Buddhist ethics to extend compassionate treatment beyond the human species toward animals. That is why Buddhist ethics can be applied to issues in animal research. By comparing this ethical system with utilitarianism, it can be gauged whether or not Buddhist ethics can have practical implications for animal research.

Utilitarianism is a teleological ethical system which places the consequences of actions over and above the motives for such actions. When examining cases from the utilitarian perspective, one must use the calculations set forth by Bentham and Mill. This is dissimilar from assessing situations with the Buddhist ethical perspective. Buddhist ethics emphasize acting from nirvanic motives over the calculation of the (immediate) consequences of actions. In this respect, Buddhism is more deontological than teleological, although one should be cautious about strictly placing it in either school, for it is goal oriented in that it seeks liberation from suffering for everyone, even when individual acts can be said to be motivated, in a large part, deontologically.

Dharmasiri points out that for Buddhist ethics, morality has a hypothetical nature, and if reality or circumstances were to change, then ethical values would likewise change. He states, "This shows that Buddhist ethics is utilitarian. It is an ideal utilitarianism rather than a hedonistic one because the ultimate end of the ethical endeavour goes beyond the pleasure-pain principle."[1] It is unclear why Dharmasiri makes such as statement because the pleasure-pain principle is fundamental to the utilitarian principle, therefore it would be false to say that Buddhist ethics are a kind of ideal utilitarianism. Once the pleasure-pain principle is removed, then the ethical system

[1] *Fundamentals of Buddhist Ethics,* p 27

can no longer be called utilitarian. It is true that Buddhist ethics serve to eliminate suffering, which appears to be in accordance with the pleasure-pain criteria of utilitarianism, but this is merely apparent. That is, because utilitarianism is concerned with this realm only, the phenomenal world or *samsara*, and though it seeks to maximize happiness in this realm, Buddhism states that any happiness achieved in *samsara* is not true happiness. Buddhism seeks to transcend the suffering of *samsara* by striving towards *nirvana,* which is a state beyond pleasure and pain. One could say that Buddhism is a kind of "negative" utilitarianism, which inverts the most happiness principle, and states that actions should be directed toward minimizing suffering.[2] But this is not exactly right either because "negative" utilitarianism would be concerned with minimizing suffering in this realm only.

Every form of utilitarianism differs from Buddhist ethics. This difference is that "unlike utilitarian theories Buddhism does not define the right independently from the good."[3] In utilitarianism, good results determine whether a particular action was right or wrong. For example, when faced with an ethical dilemma whether to commit an injustice against one person for the sake of the many, utilitarianism would say that the good results for the many make such an action right. For utilitarianism, actions are right or wrong depending on the consequences of those actions; whereas in Buddhism, right actions cannot be distinguished from the idea of good actions. If an action does not move one towards nirvana, i.e., the liberation from suffering, then it cannot be right no matter what the consequences. "Wrong (*akusala*) acts cannot turn out 'in the event' to have been right by virtue of their proximate or remote effects; nor can right (*kusala*) acts turn out to

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[2] *The Nature of Buddhist Ethics,* p 175
[3] *The Nature of Buddhist Ethics,* p 177

have been wrong in the view of their consequences."[4] An action undertaken from compassionate and right motives that turns out to have disastrous consequences would still be seen as the right action according to Buddhist ethical standards, whereas for utilitarianism it would not. For Buddhist ethics, the motivation behind an act determines its rightness. This can be seen in the case of Washoe; if all of humanity studied the chimpanzee who learned sign language, decided to treat chimpanzees and other animals with greater respect and stopped destroying their habitats, eating them, and using them for biomedical experiments, this would then produce a huge amount of good consequences in the world. Yet, Buddhist ethics would still not find that research ethically right because Washoe was treated as having a lower moral status than humans, being treated merely as a means to an end. This shows that Buddhism has a deontological feature, in that it is wrong to use a being as a means to an end; here is an aspect of duty towards other beings that is not found in utilitarianism, which only focuses on the end result of an action. The motive of any action is the most important factor in determining rightness in Buddhist ethics, no matter its consequences; this is clearly not the case for utilitarianism.

Buddhist ethics cannot be reduced to a kind of utilitarianism because "...no form of utilitarianism can adequately characterise Buddhist ethics since it is not based fundamentally on a maximising principle."[5] Moral value in Buddhist ethics is a dynamic, transformative and fundamental part of a human's psychological constitution; although Mill does place importance on the cultivation of moral sentiment, utilitarianism tends to see moral sentiment as merely a factor in a calculative process, which could lead to

[4] *The Nature of Buddhist Ethics*, p 177
[5] *The Nature of Buddhist Ethics*, p 182

emotional alienation and loss of personal integrity, according to Keown.[6] In the next section the comparison of Buddhist ethics and utilitarianism will be demonstrated through a practical re-examination of the three cases presented in the previous chapters in order to show how the two systems differ in their application.

4.2 Comparison of the Three Case Studies

Case 1: Baboon Head Injury Study

The research using baboons as subjects to study the effects of head injuries subjected them to massive head trauma. It does not appear that there was a well or any formulated hypothesis to test in this research, and it is likely that the baboons were not properly anaesthetized during the head blows. Under both utilitarian and Buddhist ethical guidelines, this research would not be judged as morally acceptable. Using utilitarian calculations, the pain inflicted on the baboons greatly outweighed the pleasure that could have been gained by learning about head injuries. When looking at this case study from a Buddhist perspective, it was found that both reason and emotion could not morally accept this research because it lacked the recognition of the baboons as moral subjects, and it showed a distinct lack of compassion by the researchers. On an emotional level, it was seen as a horrible experiment, as per the reaction of people who watched the videos of the experiments in progress; they became physically ill. Buddhism could not accept this research because it led directly to the suffering of the baboons. The researchers, lacking compassion towards their subjects, can be seen as not working towards liberation, thus leading to more suffering for themselves.

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[6] *The Nature of Buddhist Ethics*, p 183

Although both utilitarianism and Buddhist ethics would not find the baboon head injury study ethically acceptable, they did so for very different reasons. In judging this case, utilitarianism used calculations of pain and pleasure, measuring intensity, duration, certainty and propinquity to assess these components of happiness for all those involved or who could be affected by the research. This resulted in an assessment that the pain experienced by the baboons in the experiment sufficiently outweighed any pleasures gained by the human researchers. Buddhist ethics would not use this type of calculation to assess the moral worthiness of research, rather it appeals to notions of compassion and love for all beings. This research is unacceptable because it deliberately caused suffering for the baboons in the experiment. In Buddhism, it is not right to cause others to suffer. The research also failed to see baboons as having any moral status, which is not right. All life deserves consideration and animals deserve consideration similar to humans. This experiment would not have been conducted on human subjects, as it would have been generally seen as highly immoral; since it was conducted on baboons, the researchers obviously did not see baboons as having moral status like humans do. Although both ethical systems arrived at the same judgements, namely that this research was not morally acceptable, it is clear that they would do so for very different reasons.

Case 2: Jane Goodall and the Chimpanzees of the Gombe

This research involved human researchers following various families of chimpanzees throughout the jungles of Gombe in order to better understand their behaviour and how it could relate to our own human behaviour. The researchers in this study did not interfere with the chimpanzees' normal patterns of life, and tried to have as little impact as they could on the environment and lifestyles of the chimpanzees. In

judging this research with utilitarian and Buddhist ethical standards, it can be deemed as morally acceptable by both.

According to utilitarian principles this research was ethically acceptable because the pleasure and the knowledge gained by the researchers, and the positive impact it could have had on the chimpanzees outweighed any pain caused by the human intrusion into their habitat. The long term effects, such as the preservation of chimpanzee habitat and the knowledge of the social patterns of these fascinating primates, show that the lives of both the chimpanzees and the human researchers were improved as a result of this research, which is a positive judgement according to utilitarian calculations. When examining this case according to Buddhist ethical guidelines, it seems that the researchers conducting this research, although they had human interests in mind, also had the interests of the chimpanzees in mind, and genuinely cared for and loved their research subjects. The human researchers wanted to study the chimpanzees in the hopes that they would learn something about human behaviour from chimpanzee social patterns, but they also wanted to protect and ensure the long-term survival of the chimpanzee species. They used the information gained to educate other people on the nature of chimpanzee intelligence, behaviour and environmental needs, all in order to help the chimpanzees preserve their natural habitat and work towards preserving their survival despite human development. They did not judge the chimpanzees as morally inferior to humans in order to study them as this type of observation is also conducted on human subjects by psychologists or others in similar fields of research.

Even though utilitarianism judged the ethical merit of this case by calculating the pleasure versus pain generated, it arrived at the same results as Buddhist ethics, which

assessed it on the basis of love and the moral status of the chimpanzees. In the end, they both arrive at the conclusion that the research of Jane Goodall and her colleagues in Gombe observing the chimpanzees is ethically acceptable.

Case 3: Washoe

In this case the chimpanzee, Washoe, was raised by humans and taught American Sign Language in order to determine the language capabilities of chimpanzees. She was treated well by the humans who housed her, with the exception of her time at the Institute for Primate Studies in Oklahoma where she had to be kept in a cage or on a leash, though otherwise she seemed to have adequate living facilities. Washoe was given a baby chimpanzee in order for the researchers to see if she could teach the infant ASL. This is a complex case, and the results of applying utilitarianism and Buddhist ethics ended with different conclusions.

In applying utilitarianism to the research using Washoe, it resulted in the case being deemed ethically acceptable. This was because the pleasure gained by the researchers and other humans, as well as chimpanzees that could be later affected, outweighed the pain that may have been caused to Washoe. As stated earlier, she was well cared for and her needs were met as best as possible. It is easy to imagine that her life in the wild may have been harder and shorter as she would have had to fight for her own survival herself, whereas in being a research subject, she had all her basic needs met, and she even got to learn ASL, which could be considered a higher quality of pleasure according to Mill.

The reason this research failed to be morally acceptable from a Buddhist ethical perspective is that Washoe was considered to be and treated as a research subject, and not

considered as having a moral status comparable to humans. Although she may have been loved by the human researchers, and they likely displayed much compassion towards her, she never could have been raised to human moral status as the subject of an extensive research project. This is shown in the fact that she had to live in a cage and go out on a leash for at least part of her life, which lowered her moral status for that part of her life. She was also moved around to various facilities as it suited her human researchers. Because she was a subject of research, the researchers put her in a caged facility when it was convenient for them, and moved her to better facilities when that became convenient. Although she was generally treated well, she was always a research subject, used for compiling human knowledge. Since her moral status was compromised, this case cannot be seen as morally acceptable, according to Buddhist ethical standards.

4.3 Problems in Applying Utilitarianism and Buddhist Ethics to Animal Research

There is a significant problem in the application of utilitarianism and Buddhism to the problem of animal research, and that is in the notion of sentience. What does it mean to be sentient according to these two systems and to science? This question must be answered if one wants to apply these ethical systems because utilitarianism is based on the ability to feel pain and pleasure. The problem that arises in Buddhist ethics is that of moral status. It is clear that one must respect all life, according to Buddhism, but what implications does this have in practice? Is it just as wrong to use plants for human ends as it is to use animals? Or is it the case that equal moral status should be granted to humans and animals, but not to other life forms? Examining the notion of sentience can help answer these questions.

The scientific view of sentience:

Although the notions of sentience and consciousness have been defined by scientists and philosophers, how they function still remains a great mystery. Certain stimuli to the central nervous system have the ability to produce sensations in human beings. The scientific community would likely agree with the materialist line that sensations are nothing but brain processes.[7] These brain processes include the redistribution of matter and energy, as well as the micro-processes of electrical conduction along dendrites and through the synapses, coupled with electrochemical changes; for convenience, the term "brain", when discussed in this manner, refers to the entire nervous system.[8] This still does not solve the mystery: "if there is nothing, really, but atoms hitting one another in the void, then that is all *we* are, really. How are we to understand these collisions as aches and pains, colours, and tastes?"[9] Even if we cannot know the answer to this question, we can still hold that sensations exist in humans from our own subjective experience, and we can observe animals for outward signs of such sensations. The CCAC Guidelines state, "In the absence of evidence to the contrary, it may be assumed that any stimuli or experience which produces pain and discomfort in humans, also does so in animals…".[10] In other words, although we cannot know for certain exactly which sensations are experienced by others or animals when exposed to certain stimuli, we can assume that they experience varying degrees of pain and pleasure. The behaviour of an animal can be observed in order to assess whether they are in pain or not, as the presence or absence of displayed stress is the only indicator of an animal`s

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[7] *Sentience*, by: Wallace I. Matson. University of California Press; Berekely & Los Angeles, California, 1976. p 6

[8] *Sentience*, p 11

[9] *Sentience*, p 3

[10] *CCAC Guidelines,* p 115

well-being.[11] Signs of pain in an animal may include: behavioural changes, vocalizations, abnormal use of body parts, impaired activity, change in temperament, restlessness, decreased food/water intake, abnormal posture, self-mutilation, and changes in bowel/urinary activity.[12] So although humans can never directly know the subjective experiences of animals, nor of other humans for that matter, they can still attempt to assess whether an animal or another person is in pain or not. For example, Ryder states that chimpanzees "above all, of course, ..show basically the same neural, behavioural, and biochemical indicators of pain and distress" as humans.[13] Any animal possessing a central nervous system can be assumed to experience sensations in ways similar to human beings, even though the mysteries of sensations in general are far from being completely explained.

Philosophical views of sentience:

There are three possible ways sentience functions according to varying schools of metaphysical philosophy; the three most prominent disciplines are materialism, dualism, and idealism. The materialist view is generally held by the scientific community. It holds that sensations are brain and neurological functions only, made from the interaction of external stimuli with the nervous system. This view will be important to utilitarian assessments because it acknowledges that animals have the same capacity to physically suffer as humans do.

The dualist view holds that there is a material body that receives stimuli from its interaction with the phenomenal world through the fives senses, then another immaterial

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[11] *CCAC Guidelines*, p 115
[12] *CCAC Guidelines*, p 116
[13] From Richard D. Ryder's article "Sentientism" in: *The Great Ape project: Equality Beyond Humanity.* ed: Paola Cavaieri and Peter Singer. St. Martin's Griffin; New York, 1993.

substance, usually referred to as mind, has consciousness of these stimuli as various appropriate sensations. For example, visual stimuli received through the body's eyes are understood by the mind as colours, shapes, depth, et cetera. In the dualistic view, animals are usually said to lack the immaterial substance that is fully cognizant of outside stimuli; they are generally seen as natural biological machines. If their behaviour displays a reaction to certain kinds of stimuli, it is only because they are naturally and instinctually programmed to make certain responses to stimuli. On this view, an animal would not experience pain or pleasure, even if their behaviour displays a reaction to such stimuli, because they are merely programmed bodies with nothing to actually be aware of the stimuli that causes pain or pleasure. The dualistic view does not align with utilitarian considerations because animals lack the capacity to suffer in a similar way to humans, which needs to be an essential trait acknowledged when using the utilitarian calculus.

The final school of thought is that of idealism, which holds to the belief that everything is mind, and all stimuli are only ideas, even though we have the illusions of a material external world. With this account it is difficult to prove whether or not animals have the subjective experiences of pain or pleasure, or how sentience functions at all. There is a branch of Buddhist, *Citta-metta,* which holds a similar viewpoint, but none of these three western views on metaphysics relate to the Buddhist vision of the nature of animals and humans.

A Buddhist view of sentience:

Form, feeling, perception/cognition, disposition, and consciousness are the five aggregates that make up a person. These aggregates are always in flux at every moment, and change throughout one's lifetime(s). If one could determine which life forms have

sentience, in that they can consciously experience pain or pleasure sensations, then it would help to answer the question of where to draw the line in ethical considerations between different life forms. It appears that animals possess similar degrees of each of the five aggregates found in humans. They certainly possess a bodily form. The remaining four aggregates are difficult to discern, like perceptions/cognitions, as to how they actually work. People who have had the opportunity to be close to a few particular animals in their life, such as pets, other people's pets, neighbourhood animals and even farm animals have likely witnessed that individual animals have individual sets of dispositions, i.e., personalities. It is safe to assume that animals do in fact have dispositions; these, according to Buddhism, they may have carried with them from a previous life.

Animals with a central nervous system have been observed to respond to outside stimulus, so it is likely that they also have feelings and perceptions/cognitions. As far as possessing consciousness, this we cannot know for certain, but it seems that, according to Buddhist metaphysics, they should. If all life forms go through the cycle of birth-death, as the Buddha holds, then animals displaying similar behaviours to that of humans likely possess the aggregates in similar fashions to humans. Humans and animals may possess higher degrees of consciousness than plant life forms, which may only possess a very slight degree of consciousness, which would hardly be referred to as consciousness in everyday language. All life possesses these five aggregates to varying degrees, and if one had to make a distinction in the treatment of certain life forms, humans and animals should be treated similarly as they possess similar aggregates; whereas other life forms may lack the ability to feel the pain and pleasures found in *samsara*. It is not ethical to

indiscriminately harm plants or other non-animal life-forms, as all life must be respected; it is only to say that when asking ethical questions, such as, "What forms of life is it okay to eat?", animals should be considered as having a status similar to humans who are not treated as food, whereas plants have a slightly lower status because they lack high degrees of sentient abilities. Eating them seems acceptable, as a necessity, in Buddhism.

A definition of sentience that all can agree on:

For the purpose of this thesis it is fair to define sentience as follows: Sentience is the ability to experience sensations that are pleasant, painful, or otherwise, through the integration of outside stimuli by the function of a central nervous system. The ability of any other being, besides ourselves, to experience sensations can be known/assumed through displayed behaviour. It must be supposed that when other beings show signs of experiencing pain or pleasure, they actually are experiencing it in a similar manner to one's own experiences. Thus, it can be thought that inflicting pain on animals for the sake of human knowledge should be given serious ethical consideration: "It is the empathetic recognition that others consciously experience the mysteries of pain and distress, much as we do, that often appears to restrain our behaviour towards them."[14] There is no reason to think that animals do not have the same capabilities as humans for experiencing pain when they possess all of the physical requirements, as decided by biological studies, i.e. a central nervous system, to experience pain.

This means that under the principle of utility all sentient creatures should be given similar consideration. The same could be said of Buddhism, which points out that animals are more similar to human beings than different therefore they should be given similar moral consideration. Due to these considerations, both schools of thought would

[14] *The Great Ape project: Equality Beyond Humanity.*

agree that when undertaking animal research, one should carefully consider the possible pain inflicted on an animal as if the animal were human. This may seem to give animals an unreasonably high moral status, but this is not so, as will be demonstrated in the final section of this chapter.

4.4 Why Animals Deserve Moral Status

The point of morality is quite extensive, and to get into such a discussion is beyond the scope of this paper. Briefly, there are many ways to explain how the notion of morality, which is intrinsically tied to the notions of good and bad, developed. One could appeal to divine command theory, the social contract or even evolution. Morality probably arose as a survival mechanism for the human species. In order for our species to flourish, we had to support each other in social networks. A further explanation of the origin of morality is that humans do not like to suffer, and on a compassionate level, to cause suffering to a fellow human becomes personally unacceptable (for most people). Natural selection perhaps then favoured early groups who were good to each other because they helped each other to survive. Humans and animals are part of evolution systems and since species depend on other species for survival, we need to recognize our survival needs as being ultimately bound to theirs. All life should be respected because it has a common origin in the primordial soup that began life on this planet.

The idea that humans and animals are part of an interrelated system parallels the Buddhist idea of dependent origination. If it is accepted that species are interdependent, then each species depends on different parts of this whole system for their own survival, and the parts that they depend on in turn depend on other species. Following this premise, we can deduce that all species depend on other species for survival in the whole

functioning system; no species should exploit another species unnecessarily because it would cause a problem for the system and be detrimental to the whole. When certain species become endangered or extinct, other species that rely on them for their own survival may also suffer because they lack the necessary food or habitat to survive. Due to the dependent nature of all species, Buddhist ethics does not condone the exploitation of any particular species. All animals and species deserve some degree of moral status, (this will have to rely on the species' ability to suffer).

The Buddhist no-self doctrine would also demand the granting of moral status to animals. This is because, although there are differences in form between humans and animals, they are fundamentally the same as they are composed of varying degrees of the same five aggregates and subject to the exigencies of mortality (the birth-death cycle). In the West the reason for granting humans moral status and not animals relied on the premise that animals had no souls or egos. There is no ultimate distinction between humans and animals in Buddhism because there is essentially no difference between humans and animals other than their form. Both humans and animals possess consciousness, feeling, disposition and sensations; they only differ in form, and if that were to be a criteria for granting moral status, then even humans would differ in degrees of status because individual humans have different forms. There is no valid reason to accept form as a reason to discriminate against beings when evaluating moral status. In this sense animals are more similar to than different from us, and they should be granted moral status similar to that of humans.

Each one of us does not like to feel pain or be deprived of pleasure, and we can assume that all fellow humans feel the same way as ourselves. Our reason tells us, at this

point, that we should not inflict harm onto others, or deprive them of pleasure, because we would not want that done to us. This is the golden rule that can be found in various forms among all cultures around the globe. On an emotional level, most people do not like to see others suffer, it makes them sad, angry or even physically sick. These feelings, along with our rationality, are part of how we construct our moral norms. One of the most important factors in establishing morality is our desire to suffer as little as possible.

Both utilitarian and Buddhist ethics hold that the reduction of suffering is an important factor in morality. The chief aim of utilitarianism is to minimize pain and maximize pleasure, so the most important factor in determining moral status should be whether or not a being has the ability to experience pain or pleasure. The goal of Buddhist ethics is the liberation of beings from suffering. This definition of suffering goes beyond the common understanding of suffering as pain and the absence of pleasure, as all life is considered to be plagued by the condition of suffering. One cannot assume that the ability to experience pain or pleasure should be the main criteria for granting animals moral status, as it is with utilitarianism, but it should be considered as an important factor in granting animals moral status. Animals, possessing consciousness, in similar fashions to humans, can suffer more than species such as plants, which are not consciously aware of their suffering. Inflicting pain upon animals is not compassionate, and thus not conducive to the liberation of all beings from suffering.

Although it has been established the Buddhist ethics would grant animals moral status, it is still hard to determine whether or not animals should have equal moral status with humans. Certain ethical decisions would allow for granting animals similar moral

status, but not equal, to humans. For example if one had to run into a burning house and save either a dog or an unconscious person, Buddhist ethics may promote saving the person before an animal because a human lifetime has more potential for enlightenment than a dog's. That is to say Buddhism values human rebirth because it allows for the possibility of reaching *nirvana* by following the Noble Eightfold Path. Animals, like humans, possess Buddha-nature but it is more difficult for them to follow the path towards enlightenment. Therefore in certain instances it would be morally permissible to consider humans as having more moral worth than animals. This does not seem to justify most types of animal research though; more problematic is the fact that in certain instances Buddhist ethics may grant animals moral status equal to that of humans.

Certain moral judgements may require considering animals as morally equal to humans. Buddhist ethics promote reverence for life and would advocate the avoidance of using animals as tools, which may contribute to the view that humans have domain over them to do what they wish. Humans are not forbidden to use animals, according to Buddhism, but it is important that right views are in place when making use of them. Although many Buddhist traditions would advocate vegetarianism, it may be necessary to rely on animals as a food source for humans in that case using animals to fulfill human desires is allowable. An attitude of compassion and respect for the lives of the animals used for food should be maintained. Even if one is required to use animals for certain ends they should not be seen as mere resources, but as valuable lives and they should be treated accordingly. Buddhist ethics could not condone practices that cause animal suffering needlessly for human desires. For example, the harsh practices of factory farming that cause great suffering to an immense number animals in order to make the

process of generating large quantities of meat more efficient, for a population that does not require those amounts, would be seen as wasteful and uncompassionate according to Buddhist standards. Animals should not be seen as a product or commodity, which is the same way one should human beings. In this respect it would appear that Buddhist ethics would consider animals and humans as having equal moral worth.

Just as it is acceptable to conduct research on humans it may be morally permissible to conduct certain types of animal research. It is still problematic however, because unlike humans, animals have no way of consenting to be subjects of research which an important element of conducting human research. It is impossible to give equal treatment because of their limited capabilities, but their interests should be weighed as heavily as human interests when possible. It is also problematic because the type of research animals are used for are usually the kind that would not be done on humans. This may mean that Buddhist ethics could not condone many types of animal research; specifically ones that are not absolutely crucial to human health.

It may be argued that because a human lifetime (or many) is more valuable than an animal's, and certain types of animal research are important to in promoting human health and saving lives that they should be justifiable by Buddhist ethics. Therefore Buddhist ethics could still allow certain types of animal research. Deciding when the value of human life exceeds the duty to not use animals as a means to fulfill our desires remains hugely problematic.

In conclusion it must be conceded, according to both systems, that animals should be granted moral status. Utilitarianism grants moral status to animals because they have the ability to feel pain when deprived of pleasure. There are two important reasons why

animals should be granted moral status according to Buddhism: the first is that all life is interrelated and is part of the same whole, and the second is because there is essentially no difference between humans and animals other than their form. In certain circumstances Buddhist ethics would grant moral status to animals similar to that of humans, and at other times it would grant animals' equal moral status.

Conclusion

The purpose of this thesis has been to explore the application of two ethical systems to the practice of animal research, utilitarianism and Buddhist ethics. By comparing utilitarianism, which has been widely used in assessing the ethics of animal research, to Buddhist ethics, which is relatively new to the field of applied ethics, it has been seen that there is a wider dimension to the ethics of animal research than that of pleasure and pain. The notions of compassion and not treating beings as means to ends, which are found in Buddhist ethics, may be beneficial, and yet problematic to the field of animal research.

The principal challenge in applying both utilitarianism and Buddhist ethics to animal research that was encountered in the course of this study, was the problem with defining sentience, as seen in the last chapter. Although many philosophers, specifically utilitarians, appeal to the notion of sentience as being important to ethical considerations, most have failed to offer a specific definition of sentience. The primary assumption seems to be that sentience requires the ability to experience pain or pleasure, but specific criteria of what this entails seems to be lacking. It leaves the question open as to what degree of sensations producing pleasure or pain are required to deem a creature sentient, and how can we judge the experience of these sensations across a variety of species, when it is clear we cannot even explain and understand the subjective experience of pleasure and pain in other members of our own species? In order to rigorously apply the utilitarian calculus to the problem of animal research, this question must be answered, and this thesis has offered a merely tentative definition of sentience that suits the purpose of this project. It by no means purports to have arrived at a definition of sentience that

would be suitable for all enquiries, for defining what it means to be sentient is an enormous task that is simply beyond the scope of this thesis.

It is interesting to note that there must be a presupposition of sentience inherent in many forms of animal research. In Chapter 1, section 3, six categories of animal research were identified; each one assumes a degree of sentience in animals, for the bulk of such research being conducted towards drug discovery and new medical devices relies on the research animals' ability to feel pleasure and pain. Some of this research tests basic physiological reactions to certain chemicals or stimuli presented to the animal. It is assumed that any animal's response to the stimuli would be similar to that of a human, otherwise there would be no point in testing new drugs or treatments for humans on animals. Even animals which do not possess a central nervous system are used in scientific research in order to study the physiological responses to the scientific manipulations of their bodies.

A working definition of sentience was offered in the final chapter which aims to appeal to the scientific community and the ethical systems of utilitarianism and Buddhism. This definition relies heavily on the scientific criteria for sentience, which means the possession of a central nervous system. The possession of a central nervous system can be used to easily distinguish certain animals as sentient while excluding others. If one abides by this definition, then when using utilitarianism to examine the ethics of animal research, one can exclude all animals without central nervous systems from utilitarian calculations, because they are not sentient, and therefore lack the ability to experience pain or pleasure. It could be said that those creatures lacking central nervous systems do not have the ability to suffer, so they have no moral status on

utilitarian grounds. To maintain this definition of sentience as simply the possession of a central nervous system is problematic because it is possible other species lacking a central nervous system still have the ability to suffer in a way that does not meet such standards (of science). If this is the case, then it would be unethical to exclude these beings, according to utilitarianism. Therefore, the definition of sentience on these grounds remains suspect.

Finding the correct definition of sentience is less problematic for Buddhist ethics because they do not rely on the ability of beings to experience pain or pleasure for distinguishing who is worthy of moral consideration. For Buddhism, all life can be considered as worthy of moral status because all life suffers. Every life-form should be treated with compassion, whether or not it has a central nervous system. In this respect, Buddhism avoids the problem of where to draw the line for ethical considerations, which other systems that rely on sentience cannot avoid. Since the time of Aristotle, it has been common assumption of science, and the human community in general, that nature is laid out in some sort of hierarchy with humans at the top, and therefore, the most worthy of moral consideration. Even with utilitarianism, this hierarchy is still present as sentient creatures are granted moral status above non-sentient creatures. In general Buddhism avoids this problem, although that does not mean all life should be treated equally, when it comes to make certain ethical judgements it is morally permissible by Buddhist standards to place a higher value on life forms with a higher capability of achieving enlightenment.

Although Buddhism avoids the problem of requiring a strict definition for sentience, it is not without problems in its application to animal research. The main

problem is that it may be far too limiting in terms of what researchers may do with/to animals in order to gain scientific knowledge. If it is wrong to use other beings to fulfill human desires (e.g., to use as tools for learning), then all scientific research using animals could be seen as ethically unsound, according to Buddhist guidelines. Only the passive study of animals in their natural habitat may be permitted, as it is the only research that does not impact an animal's life. If this type of research were the only type permitted, then many of the benefits of animal research would be lost. The medical advances that can be made studying animals would be lost, and that could lead to increased human suffering from diseases, such as the bird flu. The injunction of never using life-forms to fulfill desires could be taken to extremes, limiting uses of all life-forms, for not only research, but the sustaining of human life, because after all, most life-forms require the use of other life-forms as nourishment or otherwise to survive. Therefore, taking this notion to its most extreme would be absurd, even for the most devoted Buddhist, as it would necessarily imply not consuming any living organism, even as a means for survival. Luckily, this is not what Buddhist ethics advocate, as it cautions against adopting any sort of extreme measures; it promotes the middle way. There may be times when Buddhist ethics would condone animal research if it were to save many human lives, all research would have to be strictly judged on its merit to promote human life, and therefore enlightenment, over its necessity to use animals as tools.

The most important implication of using Buddhist ethics in animal research is the promotion of compassion on the part of the researchers towards animals. Even the most ethical researcher using the utilitarian calculus could still find themselves detached from the animal subjects of research, and see and treat them as mere instruments for gaining

knowledge. Once animals are seen simply as tools of research, it is easy to lose sight that they are life forms capable of suffering. If researchers could cultivate compassion towards their animal subjects, it may help to further refine the practice of animal research.

By promoting Buddhist ethics in animal research it could further the advancement of the 3Rs: refinement, replacement and reduction. Although most researchers in North America adhere to this 3Rs paradigm, they may do it for a variety of reasons; these reasons may be financial or simply the wish to avoid trouble for deviating from the current standards of practice. However, by cultivating compassion towards their animal research subjects, they can strive to refine their research techniques, replace animals with other research methods, and reduce the overall numbers of animals used. This would lead to the reduction of suffering in animal research subjects, which would adhere to utilitarian guidelines, as well as reduce the overall number of animals used as means toward scientific ends, thus fulfilling Buddhist ethical requirements.

Researchers practicing compassion would take further care to treat their animal subjects appropriately, not simply because it is part of the CCAC's guidelines, but because they would genuinely care about the comfort of the animals. This could help alleviate tensions between the animal activists and the scientists because there would be a reduction in the number of cases of animal (ab)use. Animal activists could also be comforted knowing that researchers have the animals' interests in mind, not just the goals of their research. This would help bridge the gap between researchers and animal activists on the four points of disagreement that DeGrazia identifies (chapter one). Yet, the disagreement on the moral status of animals may not be resolved absolutely with both

sides agreeing on exactly what moral status animals have; but it would be fair to say that animal activists would like to maximize the moral status of animals with the goal of protecting them from abuses by researchers. This point of contention would ease as the researchers' compassion towards animals compelled them to treat research animals (karmically) well. The moral status of animals could increase for the researchers, though it would not prevent them from conducting their research, but they would take care to treat their animals with the respect the activists think the animals deserve.

By using the utilitarian calculus, along with compassion, the second point of contention between researchers and animal activists would also be eased. The claim that promoting human health justifies harming animals would remain a point of contention, but could be lessened. If animal activists could be assured that researchers have compassion towards their animal subjects, and do not want to harm them anymore than necessary, then it may ease the tensions. A big problem that the activists have is that they think that researchers have no feelings of benevolence for their research animals, and are quick to use them in the pursuit of knowledge without any consideration of their suffering. If activists could see that researchers do have compassion towards their animal subjects, then they could see that although the researchers need to use the animals to alleviate the suffering of humans, they are not doing it without regard for the suffering of the animals.

The third point of disagreement between activist and animal researchers is whether or not the current protections for animals used in research are adequate. This problem cannot be addressed through shifts in ethical theory, but must be resolved through the implementation of policy. If institutions such as the CCAC which shape

policies could implement guidelines that use a mixture of utilitarianism and Buddhist compassion, it may help to ease this problem. At this point it seems that the application of the utilitarian calculus would be more useful, as it is easier to formulate policy out of this, rather than compassion. The problem with using Buddhist ethics to implement policy is that for it to be truly effective it appears that compassion must be cultivated at an individual level and researchers cannot be forced to become practicing Buddhists. However, guidelines founded on Buddhist ethics, but practical for implementation regardless of religious belief, could be put in place that encourage researchers to view their animals as beings worthy of moral consideration, and not just as tools to fulfill human desires. Researchers would have to see animals as individuals that have their own subjective experiences and potentialities in life, not just as research tools. Researchers abiding by the principle of utility in their research, as well as having compassion towards their subjects, would make certain that the benefits would outweigh the harms in all research. Buddhist ethics would be a useful supplement to the utilitarian guidelines that are already in place, as it would encourage the researchers to be connected to their animals in a compassionate manner, which would then ensure that the utilitarian calculus gave animal suffering the weight it truly deserves. It would be harder for activists to have grounds for complaint, although they still may disagree on what constitutes a benefit or harm, and therefore, there may still linger problems with using animals in research.

The final ground for disagreement between animal researchers and animal activists is whether or not an animal's life is morally protectable. As this thesis has shown (chapter four), both utilitarianism and Buddhist ethics advocate granting moral status to animals, therefore their lives are morally protectable. Utilitarianism uses the

grounds that if animals are capable of suffering, then they should be granted moral protection. Buddhist ethics advocates moral consideration for all life-forms, though in certain situations it may be hard to judge whether animals should be granted similar or equal moral status to that of humans. So using both of these ethical systems to generate guidelines for animal research would serve to help eliminate this point of disagreement between animal researchers and animal activists.

Using Buddhist compassion as a supplement to utilitarian guidelines that are already in place would encourage researchers to be more connected to their animals, to see them as worthy of moral consideration, rather than just as means to ends. Although the development of compassion is a significant part of Buddhist ethics, it cannot be consider on its own. So far it has been discussed as a useful strategy, to take the idea of compassion and use it to encourage researchers to care more for their animals while still applying the utilitarian calculus. But to what extent can Buddhist ethical systems advocate animal research at all? As was noted earlier, when taken to extremes, it appears that Buddhist ethics may not condone any type of research that directly used animals as means to ends. The most ethically sound research, according to Buddhist ethics, would be the passive observation of animals in their natural habitat, along the lines of Jane Goodall's studies in Gombe. The most ethically unsound research would be any research that leads to the extermination of any animal, as the first precept of Buddhism says: do not kill. Clearly any research that leads to the end of any animal's life would not be permissible according to Buddhist ethics. There are many practices of animal research that lie between the two extremes of passive observation and killing, so it must be determined which practices Buddhist ethics could condone.

It seems that any research that does not harm the animal may be ethically sound, according to Buddhist ethics. The most acceptable research would actually benefit the animal rather than harm it. Conducting research on animals who have gotten sick in order to cure their disease would be the most ethically sound research that is not simply passive observation. This type of research can be done to help animals, and it still allows researchers to gain knowledge about diseases present in animal populations, and by learning about how these diseases function, and developing possible treatments for them, it may lead researchers to ways of helping more animals, including humans. This type of research can be done out of legitimate compassion towards animals, without merely using them for human ends. Researchers may gain knowledge through this type of research that would help humans, if the diseases they are studying and trying to cure are similar to those also found in humans, or if they are investigating strains that could mutate into a human disease, such as the bird flu. Buddhist ethics would not advocate the deliberate exposure of animals to a harmful disease in order to conduct this type of research, so research would have to be done on an animal in which the disease has been acquired naturally.

Without being able expose animals to diseases deliberately, this greatly limits the capacity to learn about human disorders from animal research. Much of the research being conducted by contemporary animal research is done by exposing animals to certain harmful conditions in order to study their effects, and in order to try new types of treatments for the condition on animals. By not being able to expose animals to harmful conditions in order to study potential cures, this would greatly limit the type research that is done towards promoting human health. It seems that adopting Buddhist ethics would

drastically change the way such animal research is conducted, in a way that most researchers would not likely find acceptable, as it would circumscribe their capacity to help humans. Fully adopting all aspects Buddhist ethics does not seem very practical, if one wants to continue many of the current research practices, which would be deemed unethical by Buddhist standards. Perhaps a gradual implementation of Buddhist ethics in the realm of policy would be best, until they can be fully adopted once the view of animals as mere tools shifts towards a view of them as being worthy of moral status.

This can begin by practicing animal research using guidelines adopted from a hybrid of both utilitarian and Buddhist ethics. This is not to say that the two systems should be reduced to one ultimate system for determining what constitutes ethical conduct, for that would be impossible, as both depend on entirely different criteria for moral judgements. The best approach would be to continue the use of utilitarianism to create the policies at a legislative level by such committees as the CCAC that determines the standards of practice, as well as incorporate guidelines to encourage Buddhist compassion. This would help begin the paradigm shift towards viewing animals as beings worthy of moral status. By using the utilitarian calculus, along with the current paradigm of the 3Rs, it would ensure maximum efficiency of animal research, without diminishing its capacity to gain knowledge. Utilitarianism can be used as a tool for promoting animal welfare, as well as scientific pursuits, while Buddhist ethics could be slowly introduced into animal research.

Buddhist ethics should have a place, not just at the level of policy making, but at the level of the people involved in the research process, especially the actual researchers working with the animals. In the Buddhist view, it is clearly unfair to use animals as

mere instruments to knowledge, and mistreating them is wrong as they are life forms which deserve our compassion. The biggest problem with animal research is that it tends to see animals as nothing more than objects from which to learn. If researchers, and all other humans involved in the animal research endeavour were to try and cultivate compassion towards animals, it would almost guarantee the end of any unwarranted animal suffering that is still found in the research community. At this point, Buddhist ethics can begin to be used to formulate policies, standards of practice or even basic (training) guidelines. At first, such would involve a personal choice on the part of each individual to practice compassion. Buddhist ethics can be used in animal research to encourage researchers to develop compassion or Buddhist love towards their animal subjects, with the purpose of promoting the best possible treatment of their animal research subjects. As compassion is practiced, then research can move towards more acceptable forms. This would include not killing or introducing harmful agents to animals as a means to study the effects of diseases and treatments. Research would move towards more passive observations of animals and the study of diseases already naturally present in animals, in order to promote animal welfare with the hopes of gaining knowledge that could also be applied to humans. These types of research would be ethically sound for Buddhist ethics.

It has not been the purpose of this thesis to paint all animal researchers as cold, non-compassionate people with no regard for the welfare of their subjects, because that is simply not the case. However, it is common in all parts of western society to treat animals with less than the compassion than they deserve. The practice of using animals as mere instruments is prevalent in our food and clothing industries, as well as our

entertainment industries and (formerly) sources of transportation. It can be seen through all these facets of modern society that the development of the western world has not led to the elevation of the moral status of animals much beyond being part of the human dominion to use for whatever purposes suits us. Animal researchers are at the fore-front of this debate, and are becoming concerned with the ethical treatment of animals along with the rest of society.

It has been the purpose of this thesis to explore two interesting and important approaches to animal research, with the goal of helping to sort out some of the ethical problems that arise from conducting animal research. Utilitarianism has been shown to be a useful theory for the continuation of practical implementation of policy to form guidelines and standards of practice that are both fair to the researchers in allowing them to continue their scientific pursuit of knowledge, as well as fair to the animals ensuring that they do not suffering needlessly in the name of science. The explorations of Buddhist ethics have concluded that, although not immediately practical for the direct implementation of practices and policies surrounding animal research, standards of practice based on Buddhist ethics can be slowly incorporated in order to promote a paradigm shift in animal research, which moves towards giving animals the higher moral status that they deserve. By first encouraging researchers to cultivate compassion towards their animals, then by moving towards forms of research that are acceptable for Buddhist ethics, the shape of animal research can be changed into a more harmonious practice that does not consist of humans only using animals as tools for knowledge. It may be a long time before the full use of Buddhist ethics can be incorporated into animal research, but by striving towards this goal, the cultivation of human compassion towards

all beings will increase and perhaps animals will no longer be seen merely as instruments under the dominion of humanity.

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